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The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

National Nurseryman Publishing Co., Incorporated.

Vol. XVIII.

ROCHESTER, N. Y., JANUARY, 1910

No. 1

A PROGRESSIVE NEW JERSEY FIRM

Bobbink & Atkins, Growers of High Grade Nursery Stock RUTHERFORD, N. J.

Not many miles from New York City over in the state of New Jersey which, though notably small in size is big in the dimensions and number of its incorporated companies, there is to be found close to the town of Rutherford and ten or

plant culture but among them are representatives of the arts and crafts and all activities nearly or remotely allied to the planter's business. All this betokens large interests and connections wide and multifarious.



Conifers in large variety: A fine display as seen on Mr. Atkins' lawn.
Bobbink and Atkins, Rutherford, N. J.

twelve miles only from the busy city of Newark, the firm of Bobbink and Atkins, nurserymen, florists and planters, producers of "The World's Choicest Nursery Products."

The visitor to this interesting establishment drops into an unpretentious office building overshadowed by a great American weeping willow and finds immediate evidence of intelligent nursery activity. The trade paper man's attention is at once challenged by the display of class and amateur periodicals conveniently arranged for quick consultation. These periodicals cover not only the entire range of

THE HOME GROUNDS

But the visitor has not come to examine the workings of the office, however well managed, but rather to explore the material equipment surrounding the office. The home grounds comprise an area of 35 acres, including the glass house area of something over 100,000 feet. Among the striking features of the ranges are the quality and variety of palms, not only imported plants of large size but the plants grown from seed in these houses. Each of these double houses contain some 4,000 plants in prime condition. The

masses of *Kentia* and *Phoenix*, both in large variety, demonstrate in an effective manner, the more or less, well known feasibility of successful home production of this class of ornamentals.

One of the finest houses of camellias we have seen anywhere in the country was closely filled with these beautiful plants, then carrying a great crop of fast swelling flower buds. Something over one hundred varieties of these are ordinarily carried by this firm. They are often sold in specially grouped collections which include a succession covering the entire flowering season and a full series covering the whole range of colors.

DWARF ORANGES

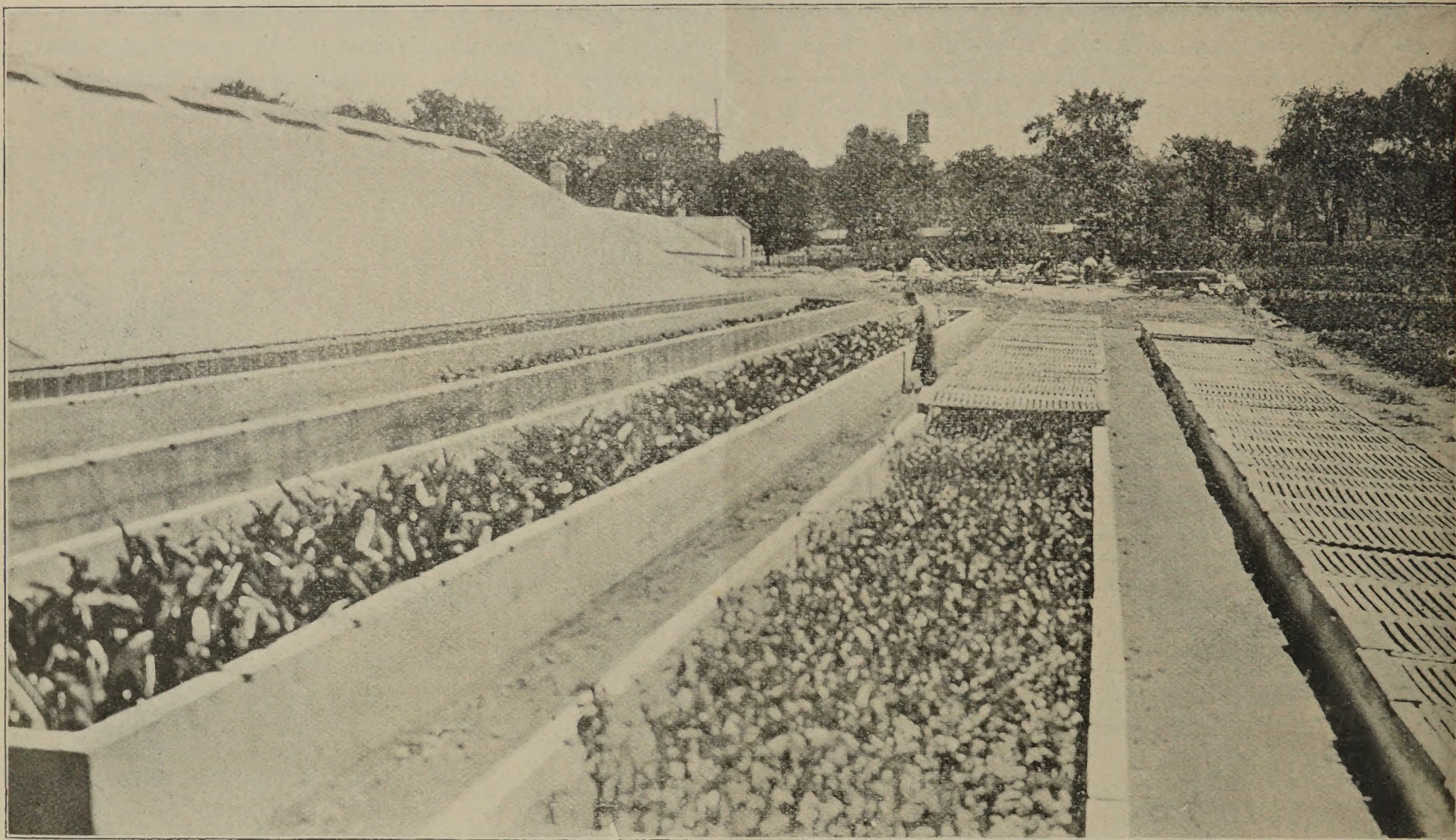
A tiny orange tree, a little more than a foot high, bearing real oranges, is an object having unique ornamental value,

houses from whence the plant materials are taken for packing and shipment. These store houses are frequently used for the holding of bays, azaleas and other broad leaved evergreens pending the busy shipping period in autumn.

A fine range of propagating houses comprising an area of eight to ten thousand square feet of glass has been constructed the past season and is now being rapidly prepared for use and occupancy. A striking feature of the construction part of these houses was the substantial reinforced concrete walls and the excellent arrangement of benches within.

FIELDS OF HIGH GRADE ORNAMENTALS

The propagating houses are supplemented by extensive ranges of propagating frames used primarily for the multiplication of deciduous and coniferous plants. This nursery is particularly well stocked with ornamental conifers and the



Showing concrete frames adjoining the glass houses. Bobbink & Atkins.

one that will appeal to the person who can afford plant luxuries. For table and drawing room decoration few plants are more attractive. A full house of these cutting propagated plants only three years of age but bearing a fine crop of ripening oranges is one of the attractive features of the range during November and December. Skill and first hand experience is an essential in bringing to successful fruitage a crop of this Otaheite orange.

There are a few plants specially featured in the large group in a condition of perennial display in the houses close to the office. The handsome catalogue issued by the firm describes in detail the complete list. We should not, however, overlook the packing houses, skillfully arranged from the standpoint of convenience and saving of labor so that they connect directly with the principal growing

firm is actively engaged in propagating these on a large scale. *Thuya*, *Retinospora*, *Taxus*, and handsome varieties of *Picea* are propagated both by cuttings and by grafting. The ability to propagate these with profit implies experience and skill. The firm of Bobbink and Atkins believes that these plants need not, indeed should not, be imported but ought to be grown in the United States under native environment. To that end skilled labor is employed and an excellent start has been made in developing a large line of this interesting and attractive class of ornamentals. The same principle is true of roses. The new tariff gives such protection to American rose growers that home production will be greatly stimulated. Not all nurserymen are successful rose growers for the reason that either conditions, or skill, or both are wanting.

An interesting feature of the field equipment is the large area devoted to the herbaceous department. These plants are systematically arranged in beds, nicely grouped and well maintained in such a way that the characteristics and uses of the plants are easily distinguished.

THE EXTENSIVE TREE NURSERY

The field cultures comprise some 240 acres adjoining Mt. Carlton, where a large stock of street, park, ornamental trees and shrubs in extensive variety are grown in wholesale quantities. The demand for this stock by landscape gardeners, by park, cemetery and city superintendents is constantly increasing. The aim of these men is to produce high grade stock adapted to native conditions and to sell this stock at a good round price, at such a price, in fact, as will justify the expenditure of sufficient labor and care in its production as will insure the production of first class material. A planting department is maintained which undertakes private and public landscaping and planting contracts.

Shipping facilities are excellent and a high type of efficiency is maintained in the packing and shipping department. The catalogue of the nursery is one of the most attractive which comes to our table. It is systematically arranged, pleasingly illustrated with half tone photographs and may be used by the planter not only as a price list but as a guide in horticultural operations.

The members of the company are men who have won their way to a position of influence in the plant growing world through the intervention of no happy accident, but by persistent effort and unremitting application to all the details of this exceedingly exacting line of work.

REASONS FOR PATRONIZING BOBBINK AND ATKINS

If the reader wishes light on this question let him read in addition to this sketch a little folder which can be had from the firm setting forth the reasons why they are strong in the belief that they have a legitimate claim upon the patronage of the planter. The public is informed that everything attractive for the lawn and useful for the garden can be purchased here. Roses, Evergreens, broad-leaved and coniferous flowering shrubs and trained fruit trees, a rarity on this side of the water, are to be found in the

well stocked nurseries. Supplement these with small fruits, vines, hedge plants, herbaceous plants and the beautiful members of the bulb family and the prospective planter may readily see his lawn and back yard transformed from ugliness and barrenness to a condition of usefulness and beauty.

Correspondence

AN IMPORTER'S KICK

Business is excellent. France is pretty near sold out of fruit and ornamental stocks this season. The demand is larger and the supply shorter than usual.

We have been shut off from taking any more orders for French stocks this season, partly on account of the shortage, but more we think as a result of the agitation among the state entomologists. If it continues much longer, French firms will demand "money first." I wish the NATIONAL NURSERYMAN would join the "Let us alone club."

J. McHUTCHINSON.
New York

ONE PHASE OF THE NURSERY BUSINESS DURING THE PAST TEN YEARS

In being asked to review the nursery business in this country for the past ten years we do not know of anything more important than the question of prices of nursery stock as compared with those of ten years ago, and the inability of nurserymen to get together and establish some basis on which to charge for their goods.

It is true that at the present time the prices for most kinds of fruit trees, (plums excepted), are high owing to a great scarcity, but if it were not for this scarcity these same trees would be offered at any price no matter what it might have cost to grow them. There is no denying the fact that the cost of growing has been greatly increased in the last ten years, but the prices have not advanced correspondingly to meet this additional cost. Much has been said by different speakers at Conventions and other meetings about the necessity of having more uniform prices and it seems to us that it behooves every grower to see that he sells his goods at a fair profit and not at an actual loss as we feel certain must be the case in many instances.

J. J. MALOY

ELLWANGER & BARRY



A decorative walk in the Nursery bordered with a combination planting of Ornamental Evergreens and deciduous trees. Bobbink and Atkins.

EDITORIAL WANDERINGS

The Okanagon Valley of British Columbia

The traveller from the east who visits the interior of British Columbia is forcibly struck with the resemblance of the lake region of that province to the fingerlake region of Central New York except that it is constructed on a larger scale. The interior region is traversed by its more or less parallel ranges of mountains, prominent among which is the Gold Range, the Rockies and the Selkirks, and between these ranges lie in long narrow troughs the beautiful Kootenay and the Arrow lakes, these being expansions of the Columbia River and Lake Okanagon. The latter lies in the so-called dry belt of the province, while the two former receive enough natural precipitation to grow certain crops such as are not likely to be seriously affected by occasional periods of drought. It is a fact, however, that no section in this interior region can be said to be entirely freed from the occasional desirability of artificial irrigation. In the early days wheat was grown without irrigation in most of the interior, but the vegetable grower, the small fruit grower as well as the orchardist regard irrigation as essential to success.

The remarks in this article bear special reference to the Okanagon Valley, one of the most interesting of the province. The pioneer fruit grower of that section was a former Governor General of Canada, Lord Aberdeen. In 1892, he purchased a large tract of land at the head of the lake Okanagon near the town of Vernon, on which he planted

extensive orchards of apples and the hardier fruits. These formed the nucleus of the famous Coldstream Ranch. The writer has had a rather personal interest in this Ranch for the reason that at the time of its organization he had an advisory part in the selection of the varieties of fruit which composed the original plantings. These varieties, so far as apples were concerned, were Spy, Greening, King, Golden Russett, Wealthy, Pewaukee and Ben Davis. At the time of our visit to this ranch late in August one of the cheering features was the magnificent crop of Spies which the 16 year old trees were carrying. McIntosh was also bearing heavily. Greening and King, notably the former, had suffered considerably from Sun Scald. In the case of Golden Russett, while the trees had succeeded fairly well, and had been productive, it did not seem to be

adapted to the climatic conditions. The fruit showed a marked tendency to shrivel soon after picking. The orchard, at the time of our visit, was laid down in clover which had been cut twice during the season and was now bearing a heavy aftermath, which would be allowed to remain on the ground over winter.

The financial success attending these original plantings has induced the rapid extension of orchard areas in the vicinity and several hundred acres have been planted and are now growing beautiful orchard trees, varying from three to six years of age. These later plantings are being blocked and sold in tracts of 10 to 20 acres, at prices ranging from

A NEW RAMBLER ROSE.



NEW ROSE DAYBREAK

Our advertising columns announce the introduction of the new rose Daybreak, an illustration of which appears herewith. As one of Jackson Dawson's productions no doubt will be entertained as to the excellent qualities and permanent value of this latest progeny of the prolific Wichuriana lineage. On the other side, the parentage is also of a high standard. The Dawson has proved to be one of the hardiest and most prolific of pillar and piazza roses.

\$100.00 and up, per acre, depending on the age of the trees. Vernon is only one part of the Okanagon Valley. Being older than the others it is more frequently heard of, but there are several places along the lake which give equal promise of becoming prominent in the fruit growing world in the near future.

Kelowna. There is probably a larger area in orchards at this place than at Vernon. At any rate there are some fine bearing orchards and large stretches of new plantings. One of the principal orchards in the region is that owned by Mr. Sterling who is the pioneer fruit grower of the section. His bearing orchard is valued at \$1500 per acre, and we understand that he is not anxious to sell even at that price. On the

bench lands near the town and surrounding it extensive plantings are being made by orchard companies, which are selling at \$250.00 and up. These are all under irrigation.

Summerland and Peachland.

These are two sections in the South Okanagon which are specializing in peaches. It was reported that each had from 2,000 to 3,000 acres planted to this fruit. Some of the orchards are just coming into bearing.

Yellow flesh varieties are used

exclusively. There appears to be a prejudice against the white varieties known to be of finer quality. These regions are more elevated as a rule than Kelowna or Vernon and the later plantings are creeping up to the higher benchlands. At the southern end of the lake is Penticton where still another company is exploiting what is called a large subdivision. Peaches and plums figure largely here as well as apples.

The hustle and energy, perhaps it would be unkind to say booming ability, of these fruit growers is phenomenal. They are certainly enterprising and they deserve all the success which is bound to come to them. The Dominion Minister of Agriculture has recently announced that an experiment station is to be located in the district. This experiment station is to answer questions and to solve problems peculiar to semi-arid conditions.

The markets of this region are in the prairie country to

the eastward and in Europe. In the prairie provinces the growers meet the competition of Ontario and to some extent Oregon and Washington. The transportation from the Okanagon while fairly satisfactory for winter fruits is not all that could be desired for tender fruits as peach and plum. It is probable that it will improve with the incoming of new railroads now in process of construction.

Obituary

HENRY KOHANKIE

Henry Kohankie was born in Painesville, Ohio, February

17, 1860. He is the first of a family of seven sons to pass to the Great Beyond.

Henry Kohankie attended the Painesville village schools for a period of eight years, and while still a mere boy commenced to work for the Storrs & Harrison Co. As the result of his quickness to learn and his close application to work, it was not long before he was intrusted with responsible positions. He was for fifteen years in charge of

one of the important departments, the ornamental department, of this great nursery firm. He was considered by the Storrs & Harrison Co. one of their most faithful employees and one in whom the utmost confidence could be placed.

About nine years ago he embarked in business for himself, giving almost his whole efforts to the growing and selling of ornamental nursery stock. The growth of his business had been most remarkable. From a few acres under cultivation during the first years, his business had grown to a nursery of about one hundred acres of the choicest varieties of trees, shrubs, vines and perennials to be found anywhere in northern Ohio. He took the greatest interest in his work.

Mr. Kohankie was married in 1886 to Mary J. Weinbrenner of Painesville, Ohio. Mr. and Mrs. Kohankie were blessed with one son, Henry J. and two daughters, Mary M. and Florence E.

RAMBLER ROSE LADY DUNCAN.



The accompanying picture is reproduced from a painting of this beautiful rose which is now being offered for the first time by the Eastern Nurseries. As a garden ornament or an Easter forcing plant, it will take rank with any and all its predecessors. The flowers are very large and beautifully colored. The foliage is rich and heavy, denoting the influence of the rugosa blood.

PURE INSECTICIDES AND FUNGICIDES

At the last session of Congress a bill was introduced in both the Senate and House providing for the government control of the purity of insecticides and fungicides in much the same manner as the purity of foods and drugs is now controlled. This bill was introduced at the instance of the Association of Economic Entomologists. With the increased use of manufactured insecticides and fungicides it has become very necessary that their quality should be standardized so that definite recommendations for their use may be made with accuracy and so that adulterated and inferior articles may not be imposed upon the farmer. In view of the fact that many states are enacting such legislation the manufacturers are warmly in favor of a National law which will govern interstate traffic and which will tend to secure greater uniformity of state legislation. While the passage of such a National law would not prevent state legislation, it would in most cases make special legislation by the states unnecessary and where states desired to legislate they would tend to pass laws similar to the national law. Several conferences of entomologists, agricultural chemists and manufacturers have been held and practically all of the large manufacturers of insecticides and fungicides are heartily in favor of the measure which is drawn to protect the legitimate interests of both the consumer and the reputable manufacturer.

The measure has been again introduced at the present Congress in the House (H. R. 2218) by Hon. E. A. Hayes of California and has been referred to the Committee on Interstate commerce. The bill will also be introduced in the senate and an earnest effort will be made by the executive committee representing the entomologists, chemists and manufacturers to bring the measure to a vote before Congress. Practically all the leading horticultural and agricultural organizations of the country have endorsed the measure. It seems probable that the bill will be passed by Congress if the members of Congress become convinced that the people wish and need such legislation. At the last session of Congress the bill was favorably reported by the senate committee on agriculture but this report was so late in the session that pressure of other business prevented vote at the short session. In their report this committee stated as follows:

"The bill was referred to the Secretary of Agriculture with the request for his views thereon and the measure as amended is exactly in line with his recommendation. The legislation has the unanimous endorsement of practically all the organizations of practical growers in the country as well as the National Grange, the National Apple Growers' Congress, the American Association of Economic Entomologists and, in fact, all the organizations representing the consumers. On the other hand practically all of the leading manufacturers are heartily in favor of the measure. Your committee considers the legislation of vital interest to the fruit and truck growers of the country and recommends its enactment in a law."

We hear very frequent complaint of impure or ineffective insecticides. In many cases these complaints are unwarranted and lack of success is due to improper usage rather

than poor quality, but there is no question that inferior goods are on the market as shown by the publication of analyses by some of the experiment stations. In the last Yearbook of the U. S. Dept. of Agriculture it is stated that the Bureau of Chemistry has analyzed samples of arsenate of lead which were practically nothing but white arsenic. This would, of course, be quite injurious to foliage. The sale of such an article is not only unfair to the consumer but hurts the sale of properly made arsenate of lead, than which there is no better arsenical insecticide. If the fruit and truck growers and farmers of the country desire such legislation for the control of the purity of insecticides and fungicides they should let their congressmen hear from them in favor of the passage of this measure (N. R. 2218) at once and make their position clear as to the need of such a law.

If you are interested in this write your Congressmen at once stating that the bill is before the Committee on Interstate Commerce and you wish their influence towards favorable report by the committee and prompt action by the House. Write at once as the matter is being pushed for speedy consideration. If everyone interested will thus show their interest the law can probably be passed.

NATIONAL APPLE SHOW

The Spokane Apple Show has once more been successfully pulled off. It is said that the display was very satisfactory and that there was keen competition in each of the twenty classes. There were 2160 entries from 23 states and two provinces in Canada. It is estimated that 1,500,000 apples were on display. This included 13 car lots, 136 5-box exhibits, 278 single box exhibits, besides the various displays of pyramids and single plates. The first prize for car of Rome Beauty was secured by Washington, for Spitzenberg by Oregon, for Wagener, Washington, Winesap, Washington also. The great mass of prizes were secured by Washington and Oregon growers. Wenatchee Valley was again successful in securing a majority of the prizes. Hood River does not seem to have figured. Outside of Washington and Oregon a few prizes went to British Columbia and one or two to the Eastern states.

THE FAMILY READING PROBLEM

To find reading that satisfies one's craving for the bright and attractive, and is at the same time perfectly suitable for impressionable young people, is at times difficult. The best magazines are admittedly published for mature readers only. The Youth's Companion alone is for all the family. While the editors keep in mind the eager desire of the young for tales of action, enterprise and adventure, these stories in The Companion are so well written, as to fascinate men and women in all stages of life's journey. And this is true not only of the fiction in The Companion, but of the entire contents. The articles, by famous writers, convey knowledge that is useful to the wisest and most experienced as well as to the immature. In short, The Companion solves the reading problem for the entire family. It is entertaining and it is "worth while."

Every new subscriber will find it of special advantage to send at once the \$1.75 for the new 1910 Volume. Not only does he get the beautiful "Venetian" Calendar for 1910, lithographed in thirteen colors and gold, but all the issues of The Companion for the remaining weeks of 1909, from the time the subscription is received.

THE YOUTH'S COMPANION,
Companion Building, Boston, Mass.
New Subscriptions Received at this Office.

Quiz Column

FORCING GROWTH

In the October issue of the NURSERYMAN, I noticed a letter from West Bros. of Damascus, Ohio, about using Nitrate of Soda on a block of under sized yearling apple trees in the way that you advised and that they had good success with it. I want to try something of the kind and apply to you for the information. Some years we are all right and grow big, fine yearling apple trees that make up all right at two years and again we fall down and do not get the growth we ought to at one year and if we can find some thing to help these little yearlings along we would be only too glad to use it. It costs as much to grow a poor yearling as a good one but the margin of profit is materially cut down on the small tree and we are willing to divide the profit with someone if we can get the good yearling every year. Awaiting your reply,

APPLE GROWER.

ANSWER

We think there is a good deal in this practice of using a special and readily available fertilizer on trees that are making unsatisfactory growth. These trees need something to encourage vegetative activity, and probably the best thing to use is a readily available food like nitrate of soda. There is of course, some danger in using this fertilizer for one is apt to think that if a little is good more will be better, but in the use of concentrated fertilizers we can easily overdo it. A good principle to practice is to apply fertilizers of this kind in small quantities. It is much better to do this than to apply infrequently in large doses. Nitrate of soda can be used at the rate of 1000 lbs. to the acre, if applied in three or four applications covering the growing season, but we do not imagine that you would need to use nearly as much as a half ton for it is expensive and we are not sure that it would pay you. It would be well worth a trial at any rate in smaller quantities and we would suggest making two applications during the fore part of the season to those blocks that needed stimulation, at the rate of 200 lbs. per acre per application. It should be sprinkled along the line of the row and then worked in slightly with the cultivator. If a rain followed the application there would be no need of covering it for it would dissolve immediately. This is our suggestion, and we think it would be worth while trying next year. EDITOR.



A nursery of high grade selected conifers. Bobbink & Atkins.



Specially prepared ground for the broad leaved evergreens, Rhododendrons and the like. Bobbink & Atkins, Rutherford, N. J.

Note and Comment

HEAVY CITRUS SHIPMENTS TO NEW YORK

The orange crop of Florida is larger this year than it has been since the freeze. Some twenty-five cars of Florida oranges reached New York on the first day of December. This heavy shipment had the effect of depressing the market. The grape fruit seemed to feel the glut more than oranges. California's crop is under the average so that it is probable prices for oranges will range about as usual the present winter.

APPLES

Heavy shipments of apples were made to New York and the eastern cities early in December. Notwithstanding this it is estimated that there are over one million barrels in storage houses between Rochester and Buffalo. Prices ranged from \$3.00 to \$6.00 per barrel. A considerable quantity of low grade stock has been stored this year which accounts for the wide range in prices.

PECAN EXHIBITION

An interesting exhibition of native Indiana pecans was recently held at Mt. Vernon, Ind. The exhibition brought out a large display of nuts and included many varieties which appeared to have considerable promise. The exhibition was under the auspices of the Department of Horticulture at Purdue. It is said that between 15 and 20 car loads of pecans are shipped out of the Mt. Vernon district of Indiana each year.

ARLINGTON, NEBRASKA ORCHARDS

Messrs. Marshall Brothers, Nurserymen of Arlington, Neb., have sold their large crop of apples to Newhall of Chicago, at a satisfactory price. These apples graded over 80%, No. 1, while orchards less systematically cared for in the same vicinity graded as low as 40%, No. 1. Marshall Brothers have been carrying on cooperative experiments in spraying with the State Experiment Station at Lincoln and their results are most gratifying as demonstrating the possibility of securing by up-to-date methods an almost perfect grade of fancy fruit.

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AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckmans, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.
American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.
Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.
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Eastern Association of Nurserymen—President, W. C. Barry, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.
National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.
Nurserymen's Mutual Protective Association—President, N. H. Albaugh, Phoneton O.; secretary, George C. Seager, Rochester, N. Y. Meets annually in June.
National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O.; secretary, W. B. Cole, Painesville, O.
Pacific Coast Association of Nurserymen—President, C. Malmo, Seattle, Wash.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.
Pennsylvania Nurserymen's Association—President, Thos. B. Meehan, Dreshertown, Pa.; secretary, Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President, J. C. Hale, Winchester, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

GREETING

To the army of plantsmen who cater to the needs of the city garden, and the dweller in the open country, we extend hearty New Year greetings. The year opens auspiciously. Interest in the whole range of plant culture continues to widen and deepen. Fruit growing as a commercial industry is steadily extending, in some places making very rapid progress. The number of amateur fruit growers is increasing rapidly each year. Life in the open country appeals as never before. The fruit, the vegetable, the ornamental plant is attracting the capital of the rich and the covetous or sympathetic attention of the poor. All this means business for the nurseryman. With the increase of business comes increased responsibilities. This is always the corollary of growing patronage. Success is measured by the intelligence of the grower, the application of business methods coupled with integrity. May the plantsman live up to his opportunity and his position of trust be properly filled.

THE NEW YEAR

May the New Year be as instructive as the old. May it bear reasonable prosperity, enlarge our experience, strengthen our judgment, and may it also admonish us that the years of productive activity and service are rapidly speeding.

The year just closed has been in many respects a noted one in plant growing circles. In general it has seen the reviving and establishing of confidence in our monetary condition. The plant grower was happily affected less than other business men by financial unrest, nevertheless his business was disturbed. The resumption of former conditions has brought renewed activity in all lines. Fruit tree planting, ornamental planting and general interest in orcharding is greater at the present time than it has been in any period during the past twenty-five years. New fruit regions are developing and old areas are extending. The interest in, and the demand for ornamentals is steadily increasing. Prices have improved. The outlook on the whole is cheering and the nurseryman should look forward to the future with confidence.

OUR PROGRAM

Although hardly necessary it is not out of place at this time of the year, the period of program making and resolution forming, to state our aims in conducting this journal devoted to the interests of the nurserymen. In brief, we stand for the best methods of growing and selling plants. We wish to carry on the work cooperatively. We want the assistance, in the form of suggestion and advice, of the men in the field and the office. Your interests are our interests. We desire to encourage the production of the best in fruits and ornamentals. We desire to introduce these in the places where they ought to be grown. We hope to discourage the planting of the unadapted and undesirable and to encourage the planting of the useful and attractive. In short we wish to encourage the production of the best in the entire range of fruits and ornamentals. We wish to labor with the nurseryman in reducing the cost

of production so that the legitimate profits of the grower may be larger. Aside from the mere question of profits there remains a satisfaction which should always accompany good service well performed. Let us then resolve to work together for a common and worthy purpose.

CAPITAL AND FRUIT GROWING

Capital is interested in fruit growing enterprises as never before. This, perhaps, has been emphasized more particularly by the rapid development of fruit areas in the West than anywhere else, but it is true of the East as well as of the West. Capital is now as ready to take up fruit growing enterprises as it is to engage in mining and manufacturing. The main deterrent is the lack of experienced and trained labor. There are scores of capitalists who would be willing to engage in fruit growing in a large way if they felt assured that they could secure competent managers and superintendents. Particularly is this true of New England where capital is moving into the country rapidly.

In New England the interest is centered in the apple, pear and peach. Other sections of the country have their specialties also. At the present time Texas is stirred up over the growing of oranges in the Pan Handle and tide water districts. Florida is extending her great fruit sections, developing the Everglade land for bananas and sugar cane while in the northern part pecan areas are rapidly increasing. In Georgia the peach is still holding its own, but with fifteen cent cotton interest is swinging toward that crop. In the southern part there is a large amount of capital going into the development of pecan groves.

All this means business for the nurseryman. It means that trees are in demand everywhere. It makes a condition decidedly better than that which sometimes occurs when bargain counter sales are frequently in evidence and when spring bonfires warm the atmosphere. The most interesting and gratifying thing about the whole matter is, however, the attitude of capital towards fruit growing enterprises.

THE SIN OF SUBSTITUTION

The practice of substituting something else for a line you are out of, is probably as old as wholesale business methods. This question was brought to our notice and consideration a number of years ago when for a short time we were connected with a wholesale hat and fur manufacturing establishment. The goods were sold by drummers under number, each line having its distinctive number. It was impossible at the beginning of the season to gauge the demand so that orders could always be filled promptly and precisely as given. Some travelers who had an established reputation for carefulness were able to sell their customers with the privilege of substituting when a special line ran short. Others were not able to do this. This seemed to be a question of personality.

This problem presses with greater weight on the nurseryman than almost any other business man. For it is more difficult to keep up all lines in stock in the nursery business than in any other type of manufacturing enterprise. A shortage cannot be made up with the same ease that it is pos-

sible in the case of the manufactured article. It is quite true that the nurseryman who substitutes frequently gives something better than that which was ordered. The customer receives fuller value, but that does not help the situation for in the purchaser's mind there rankles the thought that he did not receive what he ordered. Nor does it matter whether the order is a large one or a small one. The man of the small order is often more "pernickety" than the man who gives the large order. It is probable that some of this substitution difficulty might be overcome if the customer were given the option of cancelling that particular part of the order, if he did not care to accept another variety which, in the judgment of the seller, was as good as the variety ordered. It seems reasonable to suppose that the purchaser should have this option, but what shall we say of the firm that winks at an employee changing a name instead of a variety in the filling of an order? It is so much easier to do this and get the troublesome order out of the way than it is to run the risk of losing it by notifying the purchaser. Fortunately for the trade this type of tree man is becoming less numerous than formerly. The modern nurseryman is a business man with business instincts, who, apart from all other considerations, realizes that a good business can only be built upon a sound reputation, and the men who have been responsible for retarding the progress of ethics in the nursery business are fortunately dropping out. Unquestionably there is large temptation this year at the attractive prices which are being offered, to fill the order whether the exact variety ordered is in stock or not. Beginners in the nursery business will do well to remember that the old adage "Honesty is the best policy" is, perhaps, more forceful in the nursery business than in many other lines of effort.

REPORT OF COUNTRY LIFE COMMISSION

Another striking evidence of the progressiveness of our Western boards of trade and chambers of commerce is presented by the statement that the report of the Country Life Commission which was tabled in the U. S. Senate as a result of the opposition of Senator Tillman, is to be printed and distributed by the Spokane (Wash.), Chamber of Commerce. A limited edition was presented to the Senate but as the report was not accepted no official distribution could be made. The Spokane Chamber of Commerce now comes forward at the request of a number of farmers and business men of the Pacific Coast and agrees to publish and distribute this important document. One of the Commission's meetings was held at Spokane and a very interesting one it proved to be. There is no doubt whatever that this piece of enterprise will redound to the advantage of the region and institution concerned.

PROTUMNA ORCHARDS FLOURISHING

Mr. John W. Stewart of the Protumna Orchards, Martinsburg, W. Va., has recently completed an up-to-date and commodious packing house. The house is equipped with all modern facilities for the efficient and rapid handling of large quantities of fruit. The packing tables and storage rooms are the latest pattern.

Doings of Societies

WINE GROWERS

The annual meeting of the American Wine Growers' Association was held in New York City on Tuesday, December 7th. A business meeting was held in the parlor of the Astor House in the afternoon and the annual dinner took place in the evening of the same day. President, W. E. Hildreth; secretary, L. J. Vance.

NATIONAL MUNICIPAL LEAGUE AMERICAN CIVIC ASSOCIATION

The annual meeting of these two important organizations will be held in Cincinnati, Nov. 15th to 18th. A very attractive program has been arranged and one of the most interesting meetings of the association is confidently looked forward to. Full information can be secured by writing Richard B. Watrous, Harrisburg, Pa.

AMERICAN BREEDERS' ASSOCIATION

This national organization met as a guest of the National Corn Exposition, Omaha, Neb., December 8, 9 and 10, 1909. Seven sessions were held at which reports of committees and addresses by prominent plant breeders throughout the country were given. Among the interesting features to fruit men were reports on the breeding of vines, hardy fruits, nut trees and vine fruits. The secretary of the Association is W. M. Hayes, Department of Agriculture, Washington, D. C.

NEW JERSEY HORTICULTURISTS

The thirty fifth annual meeting of the New Jersey State Horticultural Society was held at the State House, Trenton, December 21, 22 and 23. To it came delegates from the farmers' clubs, granges, agricultural and horticultural societies of the state. In connection with the addresses and discussions a question box was in continuous use for the reception of questions on topics of vital interest to horticulturists. Premiums were awarded on fruits and flowers grown by the exhibitors.

WEST VIRGINIA HORTICULTURAL MEETING

The outline program prepared for the 14th annual meeting of the Virginia State Horticultural Society which was held in the Auditorium Hall, Winchester, Va., January 5th and 6th, was one of special interest from the practical standpoint of the Virginian fruit grower. The question box especially proved of great service in throwing light on perplexing problems of the orchard. The premium list and schedule of classes for the fruit exhibit have been well and carefully directed and the exhibit proved to be one of the most instructive and stimulating features of the occasion.

CONNECTICUT HORTICULTURAL SOCIETY

This Society elected the following officers on November 10, 1909: President, John F. Huss, Hartford; secretary, George W. Smith, Melrose; treasurer, W. W. Hunt, Hartford; First vice-president, Thomas W. Fagan, New Britain; second vice-president, J. Vidbourne, Hartford; third vice-president, C. O. Purinton, Hart-

ford; librarian, William T. Hall, Hartford; botanist and professor of Vegetable Physiology, George W. Smith; pomologist, C. H. Sierman, Hartford; executive committee: J. M. Adams, J. A. Weber, C. A. Helfricht, Francis Roulier, of Hartford, and W. H. Shumway, of Berlin.

THE NURSERYMAN AND PLANT DISEASES

Editor NATIONAL NURSERYMAN:

Sir:

A Department of Plant Pathology was established at this institution in 1907. At that time there was no space available for properly housing the Department in the College of Agriculture and what little work was done had to be conducted in odds and ends of rooms about the campus. During the spring of 1908 quarters for the Department were finally completed. Since that our time has been very largely taken with teaching work and getting ourselves established in the new quarters.

During all this period I have felt that we were not discharging our full duty toward the agricultural papers of the State. We have been able to contribute little or nothing in the way of articles for publication in these papers. Our failure to discharge our duty in this direction has not been caused by indifference to the agricultural papers but has been entirely the result of the situation in which we have found ourselves. There has not been time to prepare such articles properly.

Now that the work is well under way and a fairly large force of men engaged in the Department we feel that we can take up this additional work with some little hope of giving it proper attention. The plant disease problems of the State are many and of great importance. The Department of Plant Pathology at the College of Agriculture is doing its share so far as its appropriations allow toward the solution of these problems. During the past season we have gotten results along a number of lines which have been, I believe, of value to the growers of the State. I desire, therefore, at this time, to place at your service the Department of Plant Pathology. We shall be glad to prepare short articles on important diseases or plant disease questions, so far as we are able at any time. We shall be glad to have you refer to us plant disease questions which you receive from your correspondents or subscribers at any time. These we shall give special attention and reply to them as promptly as we can and in such a shape that they may be used for publication. I should be very glad to have suggestions from you in regard to subjects that may be of interest to your readers as they occur to you from time to time. If there is any other way in which you think we can be of service to you I should be glad to have your suggestions.

H. H. WHETZEL.

NOTE—In reply to this generous offer we think we can safely state that nothing in the field of plant diseases is giving the nurseryman more concern, more annoyance and trouble just now than the various root knot and root gall affections of fruit trees. A discussion of this subject would be profitable. EDITOR.

THE AMERICAN ROSE SOCIETY

Secretary Hammond says: "The fame of the American Rose Society is spreading to the ends of the earth. The people in New Zealand have heard of the last Bulletin and write from Wellington in behalf of their parks for a copy.

The Bulletin, giving the doings at the Buffalo Exhibition and transactions during the year will be ready for mailing about Christmas. We had an inquiry from one of the private gardeners at Madison, N. J., who promises to make an entry for the prize for pot grown roses.

At the Chicago Exhibition The Vaughan's Seed Store made a show on that class of plants which took the ladies' prize for its general attractiveness. In the great city there are thousands of places where pot plants may be tended with much attention and made a thing of real beauty. In the Metropolis of America, there is no place for large or even small gardens, but there are tens of thousands of places where a pot rose or two may be placed and we want this fact known on behalf of the Horticultural Society of New York.

**ANNUAL MEETING OF THE WESTERN ASSOCIATION
OF NURSERYMEN, KANSAS CITY, DEC. 21-22, 1909.
LARGE ATTENDANCE. VALUABLE PAPERS.**

The Western Nurserymen met at the Coates House, Kansas City, Mo., Dec. 21, 1909, a half hundred strong and enjoyed and profited by the best meeting ever held by the Association. The following firms answered the roll call:

E. P. Bernardin, Parsons, Kans.; H. F. Bente, Leavenworth, Kans.; J. S. Butterfield, Lees Summit, Mo.; C. W. Carman, Lawrence, Kans.; M. E. Chandler, Argentine, Kans.; Des Moines Nur. Co., Des Moines, Iowa; B. E. Fields & Son, Fremont, Neb.; German Nurseries, Beatrice, Nebr.; T. E. Griesa, Lawrence, Kans.; Harrison Nursery Co., York, Nebr.; Holman Bros., Leavenworth, Kans.; Holsinger Bros., Rosedale, Kans.; Kelsey Nurseries, St. Joseph, Mo.; Kansas City Nurseries, Kansas City, Mo.; J. A. Lopeman, Enid, Okla.; Marshall Bros., Arlington, Neb.; Montana Nur. Co., Billings, Mont.; C. W. Murphy, Lawrence, Kans.; J. H. Skinner & Co., Topeka, Kans.; J. W. Schuette & Co., St. Louis, Mo.; The Sedgwick Nur., Sedgwick, Kans.; M. H. Simpson & Sons, Vincennes, Ind.; F. H. Stannard & Co., Ottawa, Kans.; Stark Bros. Nur. & Orch. Co., Louisiana, Mo.; L. R. Taylor & Sons, Topeka, Kans.; Texas Nur. Co., Sherman, Texas; H. J. Weber & Sons Nur. Co., Nursery, Mo.; Geo. H. Whiting Nur. Co., Yankton, S. D.; Winfield Nur. Co., Winfield, Kans.; A. Willis, Ottawa, Kans.; Youngers & Co., Geneva, Nebr.; Mt. Hope Nurseries, Lawrence, Kans.; and W. C. Reed, Vincennes, Ind.; National Nurseries, Lawrence, Kans.; G. L. Welch, Fremont, Nebr., and Humphrey Nurseries, Humphrey, Neb., were unanimously elected and welcomed to membership. Mr. Campbell of Western Fruit Grower was present, an invited guest. The only shadow over the convention was the loss all felt by the invasion of the grim reaper death causing the removal of our genial and loved members, Judge Eugene Stark and Mr. A. C. Griesa. The sympathy of all went out to Mr. J. A. Lopeman in his bereavement in the loss of a loving wife.

The officers elected were: President, I. H. Skinner, Topeka, Kans.; vice-pres., E. S. Welch, Shenandoah, Iowa; Sec. and treas., E. J. Holman, Leavenworth, Kansas.

Executive committee: F. H. Stannard, Ottawa, Kans.; W. P. Stark, Louisiana, Mo.; J. W. Hill, Des Moines, Iowa; Will Harrison, York, Nebr.; J. A. Lopeman, Enid, Okla.

The Coates House making special provision fifty Nursery fellows lunched and dined together the first day and on the second day forty, it being near the holidays several members had to say good-bye after the first day's sessions in order to reach their homes on Christmas day. To obviate this occurrence in the future, the annual meeting will be held one week earlier. Four sessions were held, Tuesday's sessions closing at 6 p. m. Wednesday's sessions closing at 4 p. m. Enough could be written of the proceedings to fill a book.

Freight rates, Spokane decision, etc., introduced by W. P. Stark elicited keen attention, and the discussion that followed led the convention to realize that railroads, though corporations, were not always soul-less, and most of the time could be reasonably reached and grievances satisfactorily adjusted.

The move to meet and extend the glad hand to our Eastern brethren at the National Meeting in Denver next June was enthusiastic, and the Westerners led by Pete Youngers, Stark, Stannard, Weber, Bernardin & Co., Ferguson, Mayhew intend that the Eastern brethren shall feel that they have truly come into their own.

The drastic laws of some states pertaining to nursery interests that are very annoying and unreasonable, if not unconstitutional will be tested. Two hundred and twenty-five dollars was appropriated, a committee appointed and instructed to this end.

A. L. Brooke, of Topeka, Kansas, in an address on Root Knot said: "I can assure you of one thing and that is that the knotty old knots will always be there, but the value of the knot was never so well known until a Nebraska Experiment related by the Marshall Bros., in which knottier trees had become the finest trees in the orchard, and for the last five years the premium apples at the state fair had been grown on these trees." Other statements were corroborative. It has been the habit to consign root knot trees to the fire, but in the light of late revelations there appears to be something to learn.

The Association appointed Messrs. Younger, Harrison and Marshall a committee to investigate and ascertain all facts and report at the next annual meeting.

Excellent papers by J. R. Mayhew, Waxahachie, Texas; A. Willis, Ottawa, Kansas; D. S. Lake, Iowa; Marshall Bros., Nebraska; H. M. Simpson & Sons, Indiana; E. M. Sherman, Iowa, and others were read and much appreciated.

Nursery conditions, as given by representatives of the different states are healthy, trade very good and the outlook most encouraging. The full program follows:

Resolution introduced by A. C. Griesa repealing Sec. 7 of By-Laws. Resolution by J. W. Hill amending Sec. 3 of Constitution to read: "Its regular meetings shall be held annually beginning on the second Wednesday in December. Place of meeting shall be designated by executive committee." And changing By-Laws in conformity therewith.

Reports of committees on Oklahoma law, on transportation and tariff.

"Freight rates, Spokane decision, etc.".....W. P. Stark
"Discriminating Tariff and Directions of Railroad Companies,"

.....A. Willis

"Is it Policy to Replace Trees on Retail Orders Which Have Died
in One, Two or More Years After Delivery?".....C. J. Ferguson

"How to Obtain a Permit to Do Business in Texas"....J. H. Skinner

"The Use of Commercial Fertilizers".....T. E. Griesa

"Can One Year Apple Trees be Handled Most Profitably?"

.....R. J. Bagby

"Is the Demand for Ornamentals Increasing in the West?"

.....Geo. H. Johnson

"Where Will Our Supply of Japan Plum Come From for Spring?"

.....D. S. Lake

"What Can We Do to get Uniform Inspection Laws?"

.....L. R. Taylor & Sons

"Root Knot in Apple Trees".....A. L. Brooke

"Tariff on Apple Seeds, Etc., as per New Revision....E. S. Welch

"Is it Desirable to Continue Green-Houses in Connection With the
Nursery Business?".....James Truitt & Sons

"The Catalpa Speciosa. Its Future to Nurserymen"....J. Moncrief

"Shall the Western Association Contest the Adverse Laws in the
Western States?".....Marshall Bros.

"Glove Pruned and Knife Pruned Trees and Time to Prune,"

.....H. M. Simpson & Sons

"Uniform Grades".....E. M. Sherman

"Nursery Conditions and Interests: Alabama," W. F. Heikes;
Iowa, J. W. Hill; Indiana, H. M. Simpson & Sons; Nebraska, P.
Youngers; Southwest, Jno. S. Kerr; Kansas, F. W. Watson;
South Dakota, Geo. H. Whiting; Missouri, J. W. Schuette;
Oklahoma, J. A. Lopeman; Montana, Montana Nursery Co.;
Small Fruit, G. L. Holsinger; Herbaceous, Harrison Bros.

"How Shall We Entertain the Nurserymen at Denver?"

..... F. A. Weber

"National Association Exhibit"..... E. P. Bernardin

"The National Meeting at Denver..... F. H. Stannard

Final resolutions.

Adjournment.

Com. on Program, { R. J. BAGBY,
F. A. WEBER,
E. J. HOLMAN.
E. J. HOLMAN,
Secretary.

Our Book Table

THE AMERICAN FLORISTS' DIRECTORY

The seventeenth annual edition of the Florists' Directory as published by the American Florist Company has appeared and each edition shows its proportions materially enlarged. In the present edition we have a volume of 546 pages. As usual, it is a compendium of valuable information for the florist, the nurseryman, as well as the scientist and teacher.

BEVERAGES PAST AND PRESENT by E. R. Emerson. In 2 vols., 6½x9¼, 563 and 514 pp. respectively. G. P. Putnam's Sons, New York City. Price —.

These volumes give an account of the history of the various beverages used by the human race since the beginning of historical record. As all such record begins in mythology, we find the opening chapter devoted to wine in mythology. The author then traces the history of beverages throughout the Orient into Western Europe, following the steps of the colonizer to the New World. The volumes excel as a compendium of information on this subject. It is in no sense philosophic but purely a record of fact. As such, the student of the history of civilization and of sociology will find the volumes of exceeding interest and much value. This attractively presented and excellently printed work forms a valuable contribution to our knowledge of the history and economics of beverages.

ELEMENTARY PRINCIPLES OF AGRICULTURE, by Ferguson & Lewis. Published by Ferguson Publishing Company, Sherman, Texas, 1909. 5½x7½, 318 pp. including index. Illust. Price \$1.

The volume before us is the second edition of this work. The matter covered is treated in the following form: First, a general discussion of how plants grow, with special reference to the relation and function of the soil. Following in logical order is a chapter on the parasites which affect plants and the best means of controlling them. Another important division of the book is a series of chapters on the animal, its anatomy, nutrition, the products and manufacture of these. In a special chapter are treated a number of subjects of special value to nature-study teachers, while in the appendix references are given and a considerable amount of technical matter offered.

From the standpoint of the teacher probably the greatest weakness of the book is the amount of technological data offered. Each subject is treated from the standpoint of the somewhat advanced student rather than that of the beginner. On the other hand the book is exceedingly suggestive and will be undoubtedly of great use to high school teachers and those interested in secondary education.

Peter Zuger, for eight years head gardener at Elizabeth Park, Hartford, has resigned, and gone into business for himself, as florist and landscape gardener, at South Manchester, Conn.

INSECT AND PLANT DISEASE CONTROL

FUMIGATION

Under all circumstances a nurseryman should be provided with a convenient and well constructed fumigatorium, as every bundle of trees should be fumigated with hydrocyanic acid gas. Too much importance cannot be attached to this treatment of all stock of deciduous trees, even if there is no reason to believe that the stock is affected by any insect pest. Extensive experiments conducted by a number of reliable persons extending over many years has demonstrated conclusively that fumigation with hydrocyanic acid gas will not injure trees if properly conducted and further it is without doubt the most effective preventative of the distribution of any insect pest. The fumigation of the stock should be one person's business and he should be well trained in its operation. The size of the fumigatorium of course depends upon the amount of stock handled. Often it is very convenient to have two houses or rooms built in the packing house. In this connection, it may be added that all nurserymen should have a small fumigatorium in the form of a box, in which can be fumigated all buds, grafts, seedlings, etc.

The construction of the large fumigatorium will depend on circumstances. Some prefer a house large enough and so constructed that a wagon loaded with stock can be driven in it and left standing in order that the stock may be fumigated without an additional handling. This form has not proved entirely desirable in this state. Others take the form of a closed room either adjoining or built within the packing house. No matter what its shape may be, it should be carefully constructed in order to be practically air-tight.

In fumigating nursery stock, the trees should not be packed tightly in the room as this will prevent a free diffusion of the gas. Also a proper location in the fumigatorium should be selected to set the jar or jars in which the gas is generated.

Anyone in Maryland anticipating building a fumigatorium should consult this Station before doing so, as experience in such work affords opportunity for future improvements.

Finally, every precaution should be taken in the packing house to prevent the mixing of varieties, especially in getting up small shipments. All stock should be carefully scrutinized by expert eyes to detect any unsalable trees from passing by. Great care must be exercised in the packing of trees in carload lots, to prevent their roots from drying out or other injury. Shipments should not be sent out by nurserymen during a season when they are likely to arrive at their destination under adverse conditions of weather, that is, particularly, during freezing times. For such conditions cause the orchardists much trouble and anxiety.

It is, of course, to be considered that under the most favorable conditions and best regulated business operations, mistakes by thoughtless employees will occur. But nurserymen in particular should employ every means to prevent as far as possible any error which will not only reflect upon their reputation, but also at times entail severe pecuniary losses by their patrons.—*Maryland Agricultural Experiment Station, Bulletin No. 130.*

TEXAS CHEERFUL

Editor NATIONAL NURSERYMAN:

Nearly all of Texas has had rains recently. While the cotton crop was cut short by drouth in the summer, the high price makes amends. It is the highest since the war.

I can remember when the gins would give the cotton seed to anyone who would haul it away. Then we found that cattle could easily be learned to eat the seed and they charged three cents a bushel and soon they were worth ten cents a bushel for cow feed (\$6.00 a ton). Then the oil mills came into existence and the price went to \$16.00 to \$20.00 a ton. This year they are paying \$26.00 a ton. A farmer gets nearly as much for the seed as he got for the cotton a few years ago.

From the way business is starting off we feel sure of an unusual demand from now until April.

Years ago if a man wanted to sell his place you could

FAVORABLE CONDITIONS IN NEW JERSEY

We think the present conditions are so far in advance of those ten years ago that they can scarcely be compared. Ten years ago, we were selling stock in many cases for less than it cost us to produce it. After working hard for a whole year, at the expiration of that time, we were not very far ahead, but now we think we are safe in saying every nurseryman is making money. Of course some are making more than others. We have no reason to complain as we are doing all the business we can attend to properly.

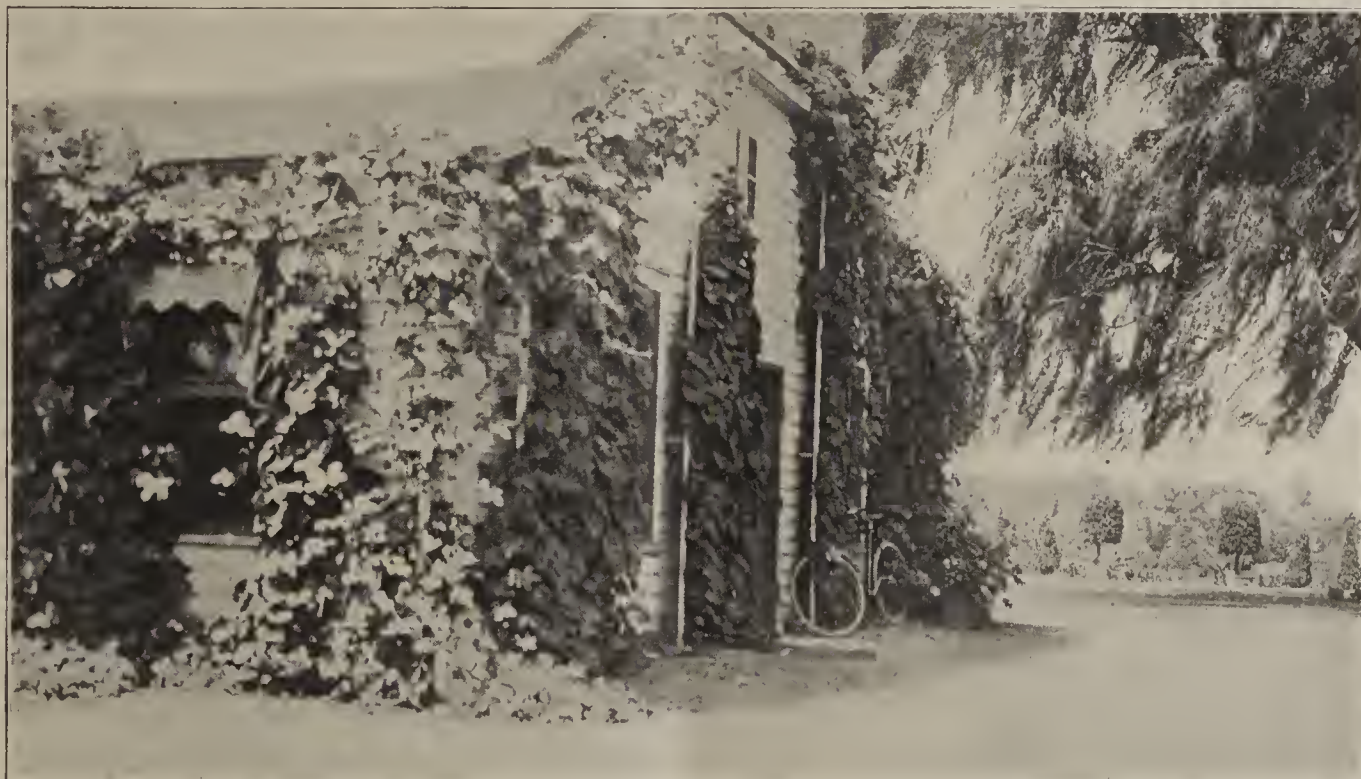
We think the trade papers are doing an immense amount of good in helping along the nursery business.

We wish to thank our friends who have patronized us in the past and hope to be favored with their orders in the future.

Yours respectfully,

Elizabeth, N. J.

THE ELIZABETH NURSERY CO.



Office of Bobbink & Atkins draped with vines and shaded by a graceful weeper.

hardly give him any trees; now many are buying to make their places sell. It seems the good sermons the nurserymen preached twenty to thirty years ago without any visible results are beginning to soak in.

The demand for evergreens and ornamentals is increasing wonderfully. The masses are observing the comfort, beauty and value that is added to a home when it is backed up with groves and clumps and masses of shades, evergreens and shrubs. Thank the Lord we may live to yet see this condition the rule instead of the rare, stingy exception.

All pendulums swing back. The nurseryman is being looked to as man's best friend as never before. We are all going to realize better prices. Experience has taught us that we must get more. Anyway, a tree is intrinsically worth several times the price we get. We are going to think more of ourselves and more of each other. I am glad I am living. Come down and we'll open a keg of nails! I will do better than that. I will do the best thing that can be done: I will have you stay in Texas. I was born here and it was "choice" not "accident."

Austin, Texas.

F. T. RAMSEY.

Fruit and Plant Notes

STEVEN'S PEACH

Syn.—Stevens' Rare-Ripe

One of the peaches which year after year in Central New York is reliable and fairly satisfactory, is the white-fleshed Stevens, which hails from New Jersey. Among the good points which are to be credited to it are vigor and productiveness of tree. The fruit is medium or above in size. It is roundish ovate in form, a yellow white ground with a pink or dark red cheek. The flesh is white throughout except near the pit where it is stained with red. The pit is quite free. In texture it is tender and juicy, with a sprightly, agreeable flavor. This is an excellent cooking variety and from the standpoint of shipping quality it is desirable. Season is from the first to fifteenth of October in Central New York.

Stevens is subject to occasional attacks of scab, which affect its market value considerably, but as this can now be prevented by summer spraying with lime and sulphur it should not weigh too heavily against it.



A winter scene in Bobbink & Atkins nursery plantation.

A SECOND INDUSTRIAL FELLOWSHIP FOR THE INVESTIGATION OF PLANT DISEASES BY THE N. Y. STATE COLLEGE OF AGRICULTURE, ITHACA, N. Y.

SUPPORTED BY C. W. STUART & CO., NEWARK, N. Y.

The Department of Plant Pathology desire to announce, through your columns, the foundation of a second industrial fellowship. This fellowship has been established by the nurserymen of the C. W. Stuart Co., of Newark, N. Y. It is for the investigation of the nature and control of the diseases of nursery stock, with particular reference to the Fire Blight or Pear Blight as it appears in nurseries. This fellowship which is to continue for a period of two years carries with it an annual salary of \$500.00 a year and \$250.00 per year to carry on the investigation. The work, during the growing season, is to be conducted in a field laboratory in one of the nurseries of the above Company or in such other nursery in the State of New York as may be mutually agreed upon by the parties concerned. Mr. V. B. Stewart, who took his Bachelor's Degree last June from Wabash College, Indiana, and who is specializing along the line of plant disease work, has been appointed to this fellowship. Mr. Stewart spent the summer of 1909 in one of the nurseries of the C. W. Stuart & Co., near Orleans, N. Y., being directly in charge of the problem of controlling the "Fire Blight" in this nursery. The result of the summer's work was so satisfactory that the nursery company has considered it profitable to provide for the continuation of the investigation in the form of the fellowship, as above outlined. The College of Agriculture is free to publish any or all of the results of these investigations at any time. This is the second such fellowship established this year in the Department of Plant Pathology. The first, reported some time ago, is the Niagara Sprayer Company Fellowship established for the investigation of the value of Lime Sulfur as a summer spray. It is expected that several more such co-operative arrangements will be made for the investigation of plant disease problems of pressing importance in this State. The results of the past season's work will be briefly described in the forthcoming bulletin from the Department of Plant Pathology, dealing with the general problem of

Fire Blight both in orchards and in nurseries. The growers in the State desiring to receive a copy of this bulletin should send a request for the same to the College of Agriculture.

Signed,

H. H. WHETZEL.

*Professor of Plant Pathology,
N. Y. State College of Agriculture,
Cornell University, Ithaca, N. Y.*

Business Movements

HARRISON EXTENDS NURSERIES

The nursery area of the already extensive grounds of Harrison & Sons, Berlin, Md., has been considerably increased the past year. They have added more than one thousand acres to the land on which stock is grown. In the new area some 3,000,000 peach seedlings were budded last season; 1,000,000 apple trees recently budded and 1,000,000 a year old; 100,000 to 200,000 cherries; 500,000 grape vines, in addition to a considerable area of bearing orchards. The packing sheds have been enlarged and two different shipping points have been added, one located at Ironside, Md., and one at Friendship, Md., the latter especially for the growing of strawberry plants and potatoes.

J. M. Pitkin of C. W. Stuart & Company, Newark, N. Y., left for the Pacific Coast the last of November, going by way of the Northwest where he expects to look into the fruit growing of the Pacific Slope, thence to California and southern points, returning to the East by one of the southern routes in five or six weeks.

INCORPORATED

Northwest Nursery Co., North Yakima, Wash., \$25,000. C. E. Honner, W. W. Ewing, J. H. Royer.

Crystal Springs Nursery Co., Seattle, Wash. Capital \$10,000. M. Furuys, W. L. Gazzam, W. A. Kuehn.

The Caldwell Nursery Co., of Caldwell, Ida., has been incorporated with a capital stock of \$25,000, by W. S. Hawkes, Charles T. Hawkes, H. H. Cummins and W. R. Wilkerson.—*Horticulture*.



School children as visitors at Bobbink & Atkins, Rutherford, N. J.

Rochester, N. Y., Jan. 5, 1910.

NATIONAL NURSERYMAN PUBLISHING CO.,

City.

Gentlemen:

For your January issue I would like to make a brief statement as to the situation in regard to federal inspection regulating the importation and inspection of foreign grown nursery stock. Mr. Charles J. Brown, Chairman of the Legislative Committee of the American Association of Nurserymen, asked me to serve on the Committee, and to take charge of matters of federal legislation, as I had had charge of the matter a year ago.

In my report to the Association at the June Convention, I gave you some information as to the bill that was introduced in Congress last winter. The same bill was again introduced in the House of Representatives on December 16th, and referred to the Committee on Agriculture.

It was the understanding last winter with Dr. Howard that he would meet the Nurserymen's Committee during the summer, and that we would endeavor to get together on a bill that would be mutually satisfactory, and at his suggestion our Committee formulated a bill and sent it to him for his consideration, but we have never been able to secure a conference.

On December 27th the Association of Horticultural Inspectors, made up of delegates from the various state inspection departments, held their annual meeting in Boston, and at their request Mr. Rouse and myself attended their meeting, and presented for their consideration the bill which had been drawn up by the Nurserymen's Committee, and sent to Dr. Howard for his consideration. With some slight amendments our bill was endorsed by that meeting, the principal change being that which provided that small shipments of one thousand or less might be inspected at ports of entry at the discretion of the Secretary of Agriculture. We agreed to this amendment, because it was expected that the inspectors of the various states would be authorized by the Washington Department to make this inspection, and in many of the states their organization is small, and it was thought that it would be a heavy burden if they were obliged to go all over the state and inspect small lots, and in order to secure their support we agreed to their amendment in this particular.

At the last meeting of the American Pomological Society, a Committee was appointed to urge federal legislation regulating the inspection and importation of foreign nursery stock, and the Chairman of that Committee, Mr. Watson, has written me informally approving of our bill, and I have asked him to give the formal approval of his Committee to the bill, and no doubt will receive it soon.

We do not think that this measure will be satisfactory to Dr. Howard, but that he will ask for a law which gives him arbitrary powers and discretion. We met him for a few minutes in Boston, but he said he was too busy to talk with us, and also said that he had two measures in mind, first—the absolute exclusion of foreign nursery stock, particularly seedlings, second—a law which would require every nurseryman desiring to import stock, to secure from him a

permit to make the importation, and to both of these propositions our Committee strongly objected.

It is evident that we shall have a fight on our hands before the winter is over, and we will need the strongest kind of support from the nursery interests of the country generally.

The Nurserymen's Bill was printed in full in the July edition of this paper, and has been amended at the instance of the Association of Horticultural Inspectors, to provide for the inspection of small lots at ports of entry. Our Committee insists that any legislation must cover these points,—first, that the inspection must be done at the final destination on the premises of the Consignee.

Second—that everything must be inspected, and nothing admitted under foreign certificates.

Third—that the law must be explicit and mandatory, and that nothing be left to the discretion of any official, except that small lots under one thousand may be inspected at ports of entry, and on these points we propose to make the strongest fight possible, and ask for your support and help. Every nurseryman is vitally interested, and should secure the active support of his member of Congress, and particularly so if his Congressman is a member of the Committee on Agriculture of the House of Representatives. That Committee is made up as follows: Charles F. Scott, Kansas, Chairman; Wm. W. Cocks, New York; Ralph D. Cole, Ohio; Gilbert N. Haugen, Iowa; James C. McLaughlin, Michigan; Willis C. Hawley, Oregon; Joseph Howell, Utah; Pleasant T. Chapman, Illinois; Charles C. Pratt, Pennsylvania; L. B. Hanna, North Dakota; Frank Plumley, Vermont; John Lamb, Virginia; Asbury F. Lever, South Carolina; Jack Beall, Texas; William W. Rucker, Missouri; Augustus O. Stanley, Kentucky; Gordon Lee, Georgia; James T. McDermott, Illinois; Wm. H. Andrews, New Mexico.

Energetic and united action will be necessary to prevent injurious and obnoxious legislation, and it is up to you to help the members of your Committee in every way possible. With the support of the Association of Inspectors and the American Pomological Society, the nurserymen feel that they have a strong backing, and should be entitled to consideration, and we can get it if we all work together.

Yours truly,

WM. PITKIN.

F. W. KELSEY CO.

F. W. Kelsey well known to American nurserymen announces that having sold his stock in the American Nursery Co. of which he was president and manager of the Sales Department he has severed connection with the firm. The business established by him in 1875 and under his exclusive control until the formation of the American Nursery Co. last year will hereafter be owned and conducted by the F. W. Kelsey Nursery Company—a New York corporation with ample resources and responsibility. The new firm which is really an old firm under a new name will be glad to receive trade lists, and special offers and quotations on good ornamentals, trained trees or specimens. The address is 150 Broadway, New York.

Transportation

THE NURSERYMAN AND EXPRESS RATES

We gave some space a short time since to a statement of rates affecting the shipment of nursery stock, kindly furnished by the manager of the American Express Company. We are glad to add an additional note on this by Mr. Leman Bradford, secretary of the Springfield Floral Company. The information is furnished by courtesy of the Florists' Review. This article is so candid and valuable that we reproduce it entire.

COMPLAINT IS FREQUENT

There is much complaint against transportation companies just now and we often hear it asserted that express rates are constantly being raised. They may have been raised on cut flowers, in certain cases, but on plants they have actually been decreasing. The express rates on plants, bulbs and seeds are of two classes. One is known as section D, the other as "general special." We should make money for ourselves by studying them.

TO COMPETE WITH MAIL

Section D matter must be sent prepaid, the rate being the same as third-class mail matter, except that the minimum charge is 10 cents for each company carrying. These rates also apply to Canada, whereas the mail rate is double, viz., 1 cent an ounce. These rates can be applied to all shipments, no matter what the weight, but 2 cents is deducted from each package when the weight is fifty ounces or more, and no charge for a package weighing less than fifty ounces to be more than the charge for fifty ounces. For example, on three pounds two ounces, or fifty ounces, the charge is 23 cents. Four pounds ten ounces can be sent to any place in either the United States or Canada where any of the express companies belonging to the traffic committee are represented for 35 cents, and 35 cents is the minimum charge on general specials. Shipments above four pounds ten ounces will be sent under the general special class unless the special rate is more than \$8 per hundred, when section D rate will again be used.

The express company will always give you the benefit of the lowest rate. But I will state here that it is well to check up the receipted bill, which should show the weight of the shipments, and if lowest rate has not been applied it may easily be detected. These overcharges are not made intentionally, but are due to a lack of knowledge of the rate on the part of the bill clerk. I have found by experience that this was one of the hardest problems to get into a new bill clerk's head.

GENERAL SPECIAL

The general special rate is defined in the express tariffs as a certain per cent or rate less than the regular merchandise rate, at pound rates, no charge less than 35 cents for each company carrying. For a number of years twenty per cent off, has been this rate, but within the last year a better rate has been given to the following states: Connecticut, Delaware, District of Columbia, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Texas, Vermont, Virginia, West Virginia, Wisconsin, and South Dakota points east of the Missouri river. This scale begins at the 90-cent merchandise rate, going to the \$8 merchandise rate, which will cover the rate from Springfield to any point in the states named.

If the merchandise rate is \$1 per hundred pounds the general special rate is 80 cents, or just twenty per cent discount. When merchandise rates are higher the general special plant rate is as follows:

Mdse. rate.	Gen. Special.	Discount.
\$2.00	\$1.50	25%
3.00	2.25	25%
4.00	2.90	27½%

5.00	3.40	32%
6.00	4.00	33⅓%
7.00	4.75	32⅛%
8.00	5.50	31¼%

POUND RATES

The special rate to all other states is twenty per cent less than the merchandise rates except when goods are shipped in baskets, when regular merchandise rates apply, but they are taken at pound rates. Pound rates means, the charge per pound is in cents what the charge per one hundred is in dollars. For example: If the merchandise rate to a point in Texas is \$6, the special is \$4, or 4 cents a pound. Then the charge on a twenty-pound package would be 80 cents, but if shipped in baskets it would be 6 cents a pound, making a charge of \$1.20, yet the charges on a package of merchandise not eligible to the general special would be \$1.65. So it will be seen that the florists are treated much better than the other shippers, except publishers, fruit and produce dealers, and shippers of beer and whisky. I could never understand why the express companies lowered the florists to a level with these four shippers, or put them on a par with the florists.

RATES TO CALIFORNIA

Another thing that is not generally known is that California has 350 points with a special rate of \$7 and \$7.50, a large majority being \$7. This is a better rate than is given by Uncle Sam. The balance of the points in the state cannot be more than \$8, which is the same rate offered by mail, with enough left on each package of fifty ounces or more to pay the expense of sending a postal notice of shipment.

OVERCHARGES

As I stated before, section D must be prepaid, but general specials may be sent collect, so that the customer gets the advantage of this rate also; but the trouble is that in many cases the agent at destination, through ignorance, overcharges the consignee. If a bill is made with either less or more charges than should be, it is the duty of the agent at destination to make correction on the bill, collecting the correct amount.

Very few overcharges are made at the larger points, but at the small towns the railroad agent acts for the express company, and in most cases on a commission. These are the ones who do not keep posted on the rates. True, they have the tariffs, but as a rule they do not study them as they should, and, unless a great deal of matter under general specials is shipped from their office, they know very little of the special rates. We will take for example a case using the same rate as I have shown: One of these agents receives a package weighing twenty pounds, billed at 80 cents. This appears to him to be a small charge, especially if he is a commission agent. He refers to his tariff, finds the merchandise rates per one hundred pounds to be \$6 and his graduated card tells him the charges on twenty pounds at this rate is \$1.65. He doesn't look to see that the special rate is \$4 and that the charge of 80 cents is correct, but adds 85 cents to the bill, collecting \$1.65 from consignee. Is it any wonder that people become discouraged and do not care to repeat the operation? How many people do you imagine have quit sending away for their plants just for this reason. You hear of a few, but the majority simply drop out. It is not the fault of the express company, but the ignorance of some employee, and prepaying the shipments will be a protection against this, to both yourself and customer.

SMALL PACKAGES

I have found that to send small packages by express is satisfactory in many ways. You have the means of tracing your shipments and knowing the condition in which they were received. Few complaints are received as to boxes being broken or plants crushed, but in cases where this occurs, claims can be made for them, and replaces sent free where goods have been damaged in transit.

The express companies have met the postal rates on plants, and have gone them one better. If a parcels post is adopted giving us a lower rate than the third-class rate, no doubt the express companies will meet the rate.

USE OF BASKETS

I am not in the employ of any express company, nor am I fortunate enough to own a block of stock in any of them, but if you will take the pains to familiarize yourselves with their rates, only to those applying to your business, I am certain you will not think them the demons they are pictured. Either ignorance of the rates or negligence on the part of the shippers in packing is often the cause for excessive charges collected on plant shipments. My attention was lately called to a case of a shipment, that, had the packer been familiar with the rates, would have saved the customer \$1.05. The shipment consisted of two packages weighing twenty pounds each. One was a box, the other a basket. These two packages could not be sent under the same rate, yet they were consigned to the same person. The charge on the basket was \$2.45, on the box \$1.40. Had it been packed in one box weighing forty pounds or in two boxes weighing twenty pounds each, the charges would have been \$2.80 instead of \$3.85. Will the customer understand why the express company charges \$1.05 more for one package weighing twenty pounds than it did for the other? And, if the express agent explains to him why this difference was made, will he not think the shipper should know of these things, thus saving his customer these excessive charges?

The higher charge on a basket is not its only drawback as a packing case. I have watched wagonmen load their wagons and messengers placing their freight in cars. If they have a small hole to fill up, just too small for any package or box available, they find a basket of plants the best thing to squeeze together and force into that hole. It fits perfectly and when it is taken out and pressed back into shape it is impossible to tell where the damage occurred, as the records show it to have been delivered in apparently good condition.

If you are going to prepay a shipment, or are going to send it collect, and don't want your customer to go into the air, do not pack in baskets. Of course, you can send to many points in baskets as cheaply as in boxes, but only in cases where the maximum charge on the regular merchandise rate would be 35 cents.

If you have more than one box for the same consignee, pack so that each shipment will weigh twenty pounds or more, as the weight is aggregated, but if one box weighs less than twenty pounds to be aggregated with other packages, it is billed at twenty pounds. If you must pack in two boxes and each weighs less than twenty pounds, fasten the two boxes together after they are packed instead of sending as two packages.

PLAYING FAVORITES

Do not play favorites in shipping. Divide your common point and foreign company business among all of the companies and you will find that you receive better service, and any grievance you may have with any company will receive better attention. If nothing is done to correct some error, or if the company is dilatory in settling claims, or tracing shipments, then take this business from it for a few days and see how quickly they will try to adjust matters. If each agent sees he is getting some business each day that the other fellow could take, he feels that you are favoring him; consequently he feels he should favor you whenever he has the opportunity to do so.

KNOWLEDGE OF RATES NECESSARY

Become better acquainted with the express plant rates; study them until you understand all the points. Any of the express agents will be glad to come to your office and spend as much time as you desire explaining them to you. If you will do this I am positive you will have more satisfactory relations with the express companies than heretofore.

The Pennsylvania Nursery Co. has changed its Post Office address from Shermanville, Pa. to Girard, Pa. at which place they have secured a large lake shore farm. Attention is called to this so that Nurserymen will be able to address them correctly and save delay. Sometime ago the Prudential Orchard Co. was taken over by the Pennsylvania Nursery Co.

THE ELBERTA

Last summer when we parted, sweet
Elberta!
You looked quite fair enough to eat,
Elberta!
Yet this for absence may atone,
Since last we met you've fairer grown;
Yes, though you have a heart of stone,
Elberta, you're a peach!

Your cheeks reflect the sunset glow,
Elberta!
Your rounded outlines allure me so,
Elberta!
Your breath is sweet as summer dew;
Your life blood richly flowing through
Imparts a matchless charm to you,
Elberta, you're a peach!

You've caused me many an aching pain,
Elberta!
I swore you never would again,
Elberta!
Your ripening beauty tempts like wine,
Yet tho' your charms were all divine;
Touch not your downy cheeks to mine;
Elberta, you're a peach!

I would not mar your bloom so fresh,
Elberta!
Nor bruise the fairness of your flesh,
Elberta!
I promised my right worthy mate
That I would be most temperate,
And gaze on you with thought sedate;
Elberta, you're a peach!

I would devour you with my eyes,
Elberta!
But gazing never satisfies,
Elberta!
Soon in your flesh so rosy bright
I'll set my teeth most sharp and white,
For when you're peeled you're out of sight:
Elberta, you're a peach!

—Mabel Swartz Withoft, in *American Florist*

AMERICAN NURSERY COMPANY,

This Company, composed of the Bloodgood Nurseries, Flushing, N. Y., the F. & F. Nurseries, Springfield, N. J., the N. J. & L. I. Nurseries, Springfield, N. J., makes the following announcement.

December 18, 1909.

"The American Nursery Company which acquired in January 1908, the business of F. W. Kelsey, a dealer and jobber in nursery stock at the above address, and has since continued said business as its New York City Sales Department under Mr. Kelsey's management, announces to its patrons and all interested, that on and after this date said Sales Department will be conducted under entirely new management, all of the interest of F. W. Kelsey in the Company being completely eliminated, and the office removed to more commodious quarters in the up-to-date Singer Building."

WESTERN NEW YORK HORTICULTURAL SOCIETY

The fifty-fifth annual meeting will be held in Rochester, January 26 and 27 and an interesting and instructive program has been arranged. The usual reports of committees will be made. Among the speakers will be: Dr. Wm. Saunders, Ottawa, Ont.; P. J. Parrott, N. Y. Exp. Station; Dr. L. L. Van Slyke, N. Y. Exp. Station; John W. Spencer, Westfield, N. Y.; Prof. H. H. Whetzel, N. Y. College of Agriculture; Ira Pease, Oswego, N. Y.; F. C. Stewart, N. Y. College of Agriculture; O. M. Taylor, A. B. Katkaimer, Macedon, N. Y.; E. O. Shuster, Rochester, N. Y.; U. T. Cox, Proctorville, O; U. P. Hedrick, Prof. John Craig and others.

In connection will be held exhibits of fruits, vegetables and spraying apparatus. A valuable list of questions for discussion has been prepared.

N. Y. STATE FRUIT GROWERS ASSOCIATION

A successful meeting of the Fruit Growers of New York State was held in Rochester, January 5-7. The attendance was large and the program was carried out enthusiastically. A fine exhibit of fruit, nursery stock, spraying machinery and materials were made. The program contained speeches of value to the fruit grower.

AMERICAN NURSERY COMPANY

The American Nursery Company which acquired in January 1908, the business of F. W. Kelsey, a dealer and jobber in Nursery Stock at the above address, and has since continued said business as its New York City Sales Department under Mr. Kelsey's management, announces to its patrons and all interested, that on and after this date said Sales Department will be conducted under entirely new management, all of the interest of F. W. Kelsey in the Company being completely eliminated, and the office removed to more commodious quarters in the up-to-date Singer Building.

To avoid confusion and ensure prompt attention, inquirers and customers will address all communications, not to any individual, but to American Nursery Company, Singer Building, 149 Broadway, New York City. Communications intended for the growing Departments may, as heretofore, be addressed to Bloodgood Nurseries, Flushing, N. Y. and F. & F. Nurseries, Springfield, N. J.

WM. FLEMER, Vice-President and Treas.

A PROTEST FROM A RETAILER

The NATIONAL NURSERYMAN Co.:

Please call the attention of the wholesale dealers and growers to the fact that unless they, the growers and dealers, stop furnishing trees and plants at wholesale to consumers, and planters the retail nurseryman will be driven out of business. I have found this same practice has prevailed for years. It will either make the retail dealer either grow his own stock or entirely ignore the wholesale growers and dealers' price lists. Please raise the question through your valuable Journal whether the growers will agree not to sell anyone unless they are engaged in selling as a livelihood, a general line of nursery stock, and oblige,

Riverside, R. I.

W. P. ROGERS.

EVERGREENS

LARGE STOCK, BOTH SEEDLINGS AND TRANS-PLANTS, OF

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PINES
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ARBOR VITAE
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WRITE FOR CATALOGUE

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Established 1848

APPLE SEEDLINGS

F. W. WATSON, Topeka, Kan.

In considering the growing and grading of Apple Seedlings we can give you only the mode as practiced in Topeka and in that vicinity.

The soil is of the first consideration. Land is usually selected with a rather dark surface underlaid with a sandy sub-soil. It should be level—for where land is uneven or hilly, the rains will wash the seedlings downward while small, and in cultivating some of the loose dirt will naturally crowd them from the uphill side, causing them to grow crooked at the collars. Land should be clean, no corn weeds, or trash of any kind should be plowed under, as it seems to harbor the wire worm which works upon the seed, also upon the seedlings while very small.

Land should be new as far as nursery stock is concerned and always away from old orchards, to grow good healthy seedlings. Land plowed in the fall seems to be preferable; it is smoothed over as soon as frost is out in the spring in order to hold the moisture. At planting time, about April 12th to 15th, it is harrowed thoroughly and again smoothed just ahead of the drill.

The drill is a wheat drill remodeled so as to sow four rows twenty four inches apart, planting the seed three-quarters of an inch below the surface and covering with a ridge three inches high.

From eight to twelve good seeds are planted to the foot—from one to one and one-half to the acre.

The bulk of the seed comes from France, packed in charcoal. As soon as received, it is run through a fanning mill to take out the charcoal, then put in sacks and soaked from five to seven days, the water being changed several times. It is then stored away in a cool place, until planting time. If weather happens to be cold so seed can be frozen before planting, so much the better. Seed that has been planted without having first been well soaked starts irregularly and often a large proportion will not sprout. At planting time the seed is spread out on long screens to partially dry so that it will pass through the drills freely. If sun is hot and seed becomes too dry, it will germinate slowly and sometimes it will fail to start at all and crop is lost. As soon as seed begins to sprout the cultivators are started.

The cultivator, which is a homemade affair, takes two rows at a time and stirs the ground thoroughly before the seed is up. Just as the seed begins to grow, but before it reaches the surface, the three inch ridge that covers it is raked off, exposing a small per cent of the crop. If, on account of wet weather or other causes this ridge is not raked off the row until the seedlings begin to put their heads through it will cause them to become "leggy" and to have very crooked collars.

Right here at the raking off period is the "danger" point in seedling growing. If a dashing rain comes within a day or two, or if weather becomes very hot and dry, it will ruin a large per cent of the crop. If a high wind comes, and you have heard somewhere that it sometimes blows in Kansas, the fine soil or dust on the surface will often roll and slide along until it has cut the tender seedlings to the ground. The ideal condition at this critical time would be moist soil before raking, cloudy weather for a day or two, with little or no wind after raking; but the ideal is seldom realized. We often get a high wind at the wrong time, sometimes heavy rains that pack the ground preventing those not up from getting out and beating those down that are up. Frequently we get a dry spell that catches the seed before it begins to sprout and sometimes after it has sprouted. If the dryness reaches the seedling while the hull is still on, it will so bind the embryonic leaves that they cannot unfold and these seedlings are gone.

After the seed is raked off the wheel hoes are started and continued until the seedlings are two or three inches high and then the cultivators alone are used, with which, by using different and larger tools as the season advances, the ground is kept perfectly clean and well pulverized.

When the seedlings are four or five inches high, brooms are fastened to the cultivators, so that they constantly sweep the rows;

California Privet Fruit and Shade Trees
Evergreens

SAMUEL C. DE COU

Moorestown, Burlington County, N. J.

Easterly Nursery Co., CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

WE make a specialty of collecting accounts for the Trade.

For particulars and references, address the

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56 Pine Street - - - - - New York City

F. E. SCHIFFERLI

FREDONIA, N. Y.

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AT IT SEVENTEEN YEARS

For Fall 1909 and SPRING 1910

GRAPE VINES AND CURRANT PLANTS

GRAPE AND CURRANT CUTTINGS

CORRESPONDENCE SOLICITED

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

ALL NURSERYMEN SHOULD BE INTERESTED IN COMMERCIAL FERTILIZERS

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LARGE OR SMALL LOTS

BLACK LOCUST SEEDLINGS

Please let me know your wants

J. A. GAGE, Fairbury, Nebr.

A BARGAIN IN STANDARD PEARS.

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

this tends to prevent insects and worms from getting a start on the leaves.

Spraying with insecticides begins as soon as the seedlings are seven or eight inches high in order to catch any leaf rollers that may have escaped the brooms. If season is rainy, damp, or there is considerable cloudy weather, Bordeaux is used also to keep leaves in healthy condition and to prevent their spotting or dropping.

If the seed procured was good, if properly treated, if not dried so much before planting, if the rains have not drowned the seedlings out, or the dry weather caught them, if the winds have not cut them off, if the spraying was effective and the leaf roller failed to find them by the last of October we commence to dig.

We use a digger similar to a tree digger, excepting in width: it is only ten inches wide. Seedlings are cut at a depth of sixteen inches. The pullers follow the diggers closely, pulling bunching, tying and burying the seedlings in a deep furrow in the field. Only a few minutes elapse between the time the digger passes under the seedlings until they are pulled, buried and covered, tops and all. If the pullers do not follow closely to the digger and the seedlings should stand for an hour or so in a hot sun or high wind after cutting, they will become soft and willowly, with a tendency to die back at the tip, showing their loss of vitality.

After seedlings have been buried in the field for fifteen to twenty days, the leaves begin to drop off, and it is then safe to take them up and haul them to the grading cellar. Here they are buried in beds in a convenient place near to where they are to be graded. In these beds the bunches stand upright, they are wet when put in and covered with dirt until only an occasional top is exposed, then a cover of manure or leaves is spread over the beds and they are left in this way for several weeks in order to sweat the balance of the leaves off before grading. Here is our last danger point—if a heavy rain or a late warm spell should come the bed is liable to heat and the entire crop may burn up. There is no sure preventive against burning, but by using a liberal quantity of dirt between the layers when seedlings are trenched in the liability may be lessened.

Grading begins about December 1st, in cellars built for this purpose. Seedlings are hauled in from the beds, run over the "shaker" to get out the leaves and dirt from the bunches, and placed upon the benches where each man takes out his particular grade. Several will take out No. 1 straight, and pile what are left upon another bench. Here the next grade, No. 1 branched, are separated, and so on, passing from bench to bench until all the different grades are taken out. Each man continues on the same grade during the grading season. As soon as graded the seedlings are tied in bunches and go through a trap door to the storage cellars where the packing and shipping is done.

An ideal No. 1 Straight Apple Seedling is one that is 14 to 16 inches long, is at least three-sixteenths of an inch in diameter at the collar and three-sixteenths of an inch in diameter seven inches below the collar and continues straight between these two points. An ideal No. 2 apple seedling is one that is 12 inches long, is at least two-sixteenths of an inch in diameter at the collar and is two-sixteenths of an inch in diameter seven inches below the collar and continues straight between these two points. An ideal No. 1 branched seedling is one that is at least three-sixteenths of an inch in diameter at the collar and has three or more roots, well distributed, not exceeding three and one-half inches below the collar. A No. 3 seedling is one that is two-sixteenths of an inch in diameter at the collar but fails to carry its diameter of two-sixteenths far enough down to grade No. 2, it is sometimes branched.

A peculiar thing about the growing of apple seedlings is the fact that they cannot be grown with profit in small quantities. If a firm uses only 100,000 to 300,000 in a season, it is economical to buy rather than to grow them. There is no profit ordinarily in growing as small a lot as five acres. This condition arises from the fact that to properly handle the seedling business it takes special tools, drills, cultivators, diggers, cellars, all expensive equipments that can be used for no other crop.

The result is that the growing of all the twenty to forty million of American grown apple seedlings that are used in this country every year is undertaken by less than a dozen firms.

NURSERYMEN WANTED

Wanted two good men, one as foreman and the other assistant. Expert knowledge not so important as practical experience and ability to do things. Must be strictly temperate. Address "ABILITY," care of National Nurseryman, stating experience, age, wages expected, etc.

Splendid assortment of standard and new sorts. Now is the best time to engage all varieties, and the only time to secure some varieties. Send list of approximate wants for lining out.

THE LEEDLE FLORAL COMPANY EXPERT ROSE GROWERS
SPRINGFIELD-OHIO

GRAPE VINES A SPECIALTY T. S. Hubbard Company

FREDONIA, N. Y.

ESTABLISHED 43 YEARS

We offer for Fall and Spring trade a large and complete stock of one and two year old **GRAPE VINES** in strong grades for nurserymen and dealers trade.

We also have an extra nice stock of one year **CURRENTS**.

Send us your want list for prices.

CALIFORNIA AND AMOOR RIVER PRIVET

Large stock in all grades. This stock being our leading specialty we are able to quote low prices, and believe that we now have the largest stock of any Nursery in the country. Besides we offer Shade Trees, Shrubs, Berry Plants, Grape Vines, Roses, Cannas, Etc., Etc. Special prices on car load lots for booking of early orders.

Trade List ready August the first.

VALDESIAN NURSERIES,

Bostic Department, Bostic, North Carolina.

FOR SALE

Silver and Norway Maple, Carolina Poplar, American Arbor Vitae, and California Privet; also 10,000 one-year Apple. Very Fine.

Would exchange for Feigley Tree Digger

R. R. HARRIS, Harrisville, W. Va.

General Line of NURSERY STOCK

1 year Peach, Berberis Thunbergii, Iboia Privet and White, Scotch, and Austrian Pine

M. T. TWOMEY, 10 Tremont St., BOSTON, Mass.

PEONIES

ONLY BY THE WHOLESALE

Let me send you my list of **OVER ONE HUNDRED** Best Varieties
J. F. ROSENFELD, - - - WEST POINT, NEBR.

L. F. DINTELMANN, Belleville, Ill.

Apple, Pear, Peach, Cherry and Plum Trees, Evergreens, Ornamental Shrubs, Roses, Gladiolus, Cannas and Dahlias

Nurserymen Should Try My Simplex Tree Baler

IT DOES THE WORK. PRICE \$16.00.

Special 20,000 California Privet.

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor

(Successor to Blair & Kaufman)

233-234 Rialto Bldg., Kansas City, Mo.

Offer for **FALL 1909** and **SPRING 1910** large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

USE OF CLIMBING PLANTS ON BUILDINGS

There cannot well be any difference of opinion with regard to the beauty of climbing plants, and their usefulness in the garden; but there is room for a diversity of views on the manner in which they should be used on the walls of public and private buildings. This diversity is greater than might have been expected, and it finds expression in walls bare of greenery, that would be greatly improved by a liberal use of plants of scandent habit; and in the covering up of buildings remarkable for their historic interest or architectural beauty, in such manner as to hide from view their distinctive features.

This difference in opinion as to the manner in which climbing plants should be used on the walls of dwelling houses and public buildings is difficult to understand, and probably a more useful purpose will be served by stating a few of the principal points that should have attention in the planting of climbers against walls than in endeavoring to give an explanation of the diversity of views that are held. It is important to give first consideration to the fact that buildings, whether public or private, are not erected specially for the purpose of displaying the charms of vigorous roses, rampant ampelopsis, or rapidly running ivies. They are designed for other purposes, and the clothing of their walls with climbers has for its object the enhancement of what beauty they may possess, or the softening down of objectionable features. The walls of outhouses are not now being considered, but it may be advisable to mention in passing that those which come into view from the garden or mansion should be wholly covered with plants that grow to a suitable height, and thrive in the aspect they afford.

The planter of climbers must be largely governed by the style of architecture represented by the building whose walls he is desirous of clothing. If it possesses the baldness which found so much favor among builders in the early Victorian days, the whole of the walls might, with advantage, be covered by climbing plants suited to their height and aspect. In these bare, barrack-like structures there is but little of beauty, and well-kept climbers will soften their lines and render them pleasing to the eye. In the case of dwelling houses of more recent date, of which the designs are more or less tasteful, climbing plants must be used with some discrimination. A judicious selection of climbers will, with careful management, contribute materially to the attractions of such buildings as these, and judicious procedure in this case means using the plants somewhat sparingly. Careful management consists in so regulating the growth that the allotted space is nicely clothed without hiding any portion of the architectural features. A well-designed house is an object of beauty, and climbing plants should be used, not for the purpose of hiding any part of it, but rather to emphasize the characteristic features of the design. There is yet another class of buildings awaiting consideration, and it is that which includes those of historic interest or remarkable for beauty of architecture. These are frequently dealt with in much the same manner as one would deal with a commonplace suburban villa, and this is unquestionably a serious mistake. As briefly stated, buildings that possess an element of ugliness should have their walls almost, if not quite, hidden by greenery; and those erected from designs that are good without possessing special merit, should be sufficiently embellished with climbers to bring into prominence whatever of beauty they may possess. Historic buildings, and those distinguished by reason of their handsome elevation, require but little aid from vegetation. In visiting an historic building one does not go to see great sheets of solemn-looking ivy or a big expanse of flaming ampelopsis, but rather is the journey made for becoming more closely acquainted with its associations, and of studying the style of architecture it represents. To the student of architecture it is a serious matter that the object lessons which a fine old building is so well able to afford should be hidden beneath a covering of ivy or Virginian creeper. In like manner fine examples of architecture, whether ancient or modern, should not have their beautiful lines broken or their exquisite workmanship hidden by climbers. It does not necessarily follow that no plants should be allowed to come near the walls of such buildings; in many instances they may be employed to advantage, but they must be used very sparingly, and with great care.—*Gardeners' Magazine*.

ESTABLISHED 1869

H. DEN OUDEN & SON

Old Farm Nurseries

BOSKOOP, HOLLAND

WHOLESALE GROWERS OF

Japanese Maples
Hardy Azaleas
Buxus
Clematis
Conifers (Specialty)

Hydrangeas
Kalmias
Magnolias
Paeonies
Rhododendrons

Spruces
Shrubs
Roses, etc., etc.

All the above at very reasonable prices

Ask for special cheap offer

Japanese Bamboo Canes

For delivery January to March 1910

BOOK YOUR ORDER EARLY

	Per 100	Per 500	Per 1000	Per 5000
12 feet long	\$2.70	\$13.00	25.00	\$120.00
14 " "	3.70	17.50	34.00	160.00
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STUMPP & WALTER CO.

50 Barclay Street, New York

E. T. DICKINSON, Chatenay Seine, France.

Grower and Exporter of

French Nursery Stocks, Dutch Bulbs,
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All grown specially for the American trade.

PEAR AND CRAB APPLE SEED,

The most complete assortment of Ornamental Stocks,
Trees and Shrubs.

Geo. E. Dickinson, 1 Broadway, N. Y.

Surplus Stock, Spring 1909

50,000 PEACH TREES, 1 yr. from bud.

10,000 APPLE, 1 yr. from bud.

100,000,000 STRAWBERRY PLANTS in six leading sorts.

MYER No. 1, AROMA, STEVEN'S CHAMPION.

Superior.

Gandy.

A general assortment of other stock.

D. S. MYER & SON,

Bridgeville, Del.

PEACH SEED

We now have in stock VIRGINIA NATURAL PEACH SEED
crop 1908, can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,

4th Ave. & Clinton St., BALTIMORE, MD

SHERMAN NURSERY COMPANY

CHARLES CITY, IOWA.

Large Growers
of

HARDY STOCK

In the
Northwest

Over 20,000,000 Evergreens in stock, 1,000,000 Grape, 5,000,000
Apple, and 100,000 Plum are counted among our assortment this
year. We are also extensive growers of a general line of Hardy
Nursery Stock.

AGENTS WANTED

MARKETING NURSERY STOCK

CHARLES E. GREENING, Monroe, Mich.

The successful marketing of nursery stock is a problem of much concern to all nurserymen. Conditions are constantly changing, new obstacles in the sale of nursery stock are continually arising. The demand for nursery products depends largely upon the results of the orchards and the general prosperity of the country. The difficulty experienced in keeping over surplus stock on account of no sale, has proven the ruin of many a nurseryman. A manufactured article may be stored away for years during a dull market; nursery stock, however, must either be sold when matured or burned. A loss occasioned in this way often eats up the profits on an entire crop of trees.

THE WHOLESALE MARKETING OF NURSERY STOCK

Is independent in a large degree upon the success of the retail nurseryman, and for the success of both, they must work together, hand in hand. The practice of mailing wholesale prices to planters who have been in the habit of buying at retail has caused untold harm to the retail business of this country, and brought disaster and ruin to many a nurseryman. Ten-cent cherry, six-cent apple, four-cent peaches and other cheap stock advertised in agricultural papers and catalogs has done more to hurt the retail nursery business than any other thing. The farmers and large planters are being educated in buying nursery stock at wholesale prices to the great detriment of the retail business. The greatest enemies to the success of the retail business in this country are the catalogs that are being mailed out promiscuously to farmers by nurserymen, some of whom have the nerve to pose as leaders in the nursery business, advertising that no agents are employed, that their products are sold at wholesale prices and the middle man's profit is thus saved to the purchaser. Such practice cannot fail to have a demoralizing effect on the retail nursery trade, and nurserymen should refrain from using this method of marketing their stock.

THE RETAIL MARKETING OF NURSERY STOCK

When carefully conducted and good reliable stock is furnished, the retail nursery business is by far the more profitable. To begin right, only reliable, honest and trustworthy agents should be employed. Local agents, selling on commission plan, have proven the most desirable. Every order should be investigated and the agent should be given to understand that all poor orders will be thrown out. The retail prices should at all times be kept up as high as local conditions will permit. Establish a reputation for honesty and reliability. Never substitute without the consent of the purchaser. Dig, grade, store and pack so that your goods will please the customer. Refrain from digging nursery stock too early in the fall, before trees have thoroughly ripened up. For fall delivery, dig as late in October as conditions will permit and make deliveries during the month of November, wherever possible.

THE USES OF THE BEAUTIFUL

"Use and beauty have too commonly been regarded as necessarily separate attributes! Things of utility must be commonplace, and it is immaterial if the commonplace be ugly; its very ugliness makes us appreciate all the more the beauty of things rare, kept precious and apart—that is the view the multitude has been led to take, and from which even many artists are not exempt.

"It was an old-fashioned custom to isolate all the nice things of the household in the 'best room,' which was too precious to live in; but the modern practice is to make the whole house as beautiful as possible.

"A forced familiarity with ugliness dulls the taste for beauty. So, unless the eyes are wonted to the beautiful by seeing it on every side, resident in the common things, beauty at its best can not be given to the things set apart to wear it as a garment of state, as in statutes, monuments, and public buildings."—The La Salle and Peru (Illinois) *Post*.

GRAPE VINES

Large Stock, properly graded.
None better in the Chautauqua Belt.
Let us know your wants.

Miner & Miner

Sheridan, N. Y.

SAN-U-JAY SCALE OIL

CONTAINS NO ACID, AMMONIA, SOAP OR ANY
CAUSTIC MATERIAL

Can be used as a summer spray in nursery work.

Costs about half the cost of other sprays.

25 years' experience in the manufacture of soluble oils,
back of our product.

WRITE FOR OUR PRINTED MATTER

Gives in full, Scores of Reports

F. G. STREET & CO., 17 Railroad St., ROCHESTER, N. Y.

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

JAS. H. BOWDITCH

903 Tremont Bld., - - - Boston, Mass.

WILLETT & WHELOCK

have a splendid stock of the following Raspberry Plants

Kansas, Black Diamond, Palmers Early, Cumberland and Plum Farmer. Large stock of Early King and other Red Raspberries

Grape Vines and other small fruits for the wholesale trade. Also fine lot of Columbian (Purple) Raspberry Plants. **PRICES RIGHT.**

WILLETT & WHELOCK, North Collins, N. Y.

CAROLINA POPLAR BOX ELDER
CALIFORNIA PRIVET and CATALPA SPECIOSA

ALL ONE YEAR OLD

For further particulars and prices, address

SOUTHWESTERN NURSERY COMPANY

C. M. REDMOND, Gen'l Mgr.

Okemah, Okla.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

INDIANA HARBOR, IND. Mfrs. of Planished Sheet Steel

For Sale. One of the best Nursery, Seed and Greenhouse business propositions on the Pacific coast. Rapidly increasing trade. Satisfactory reasons for offering for sale. No use corresponding unless you have \$10,000 or \$15,000 to invest as a starter.

"A. B.," care of NATIONAL NURSERYMAN.

Among the Experiment Station Workers

COLORADO AGRICULTURAL COLLEGE

This institution has issued in recent months several suggestive bulletins. Among them is Bulletin 136 on Dewberry Growing, which gives an account of that industry in the Plateau Valley of Colorado. The Lucretia seems to be the principal variety, while the Loganberry is a promising competitor.

Bulletin 139 on Pruning of Mature Fruit Trees, is a subject which from the standpoint of the Colorado fruit grower is treated in a timely and practical manner. The trees which are called mature in that section would be regarded as juveniles here in the east.

Bulletin 140 discusses Strawberry Growing, and gives directions for the cultivation of this crop under irrigated conditions. The bulletin will be valuable for beginners in strawberry growing in the irrigated section of the Rocky Mountain states.

MICHIGAN

Bulletin 253 of the Michigan Agricultural College gives an account of the actual returns secured from three mature and somewhat neglected apple orchards which were renovated and carefully managed for a period of five years. The total expense of managing these three orchards was \$531.00, the total returns were \$1,367.00; the average net profits per year were \$167.00; the average net profit per acre per year, \$104.00. The bulletin also includes a statement of how old orchards may be renovated most advantageously.

HAWAIIAN AGRICULTURAL EXPERIMENT STATION

Bulletin 14 and Press Bulletins 21 and 22. That the fruit interests of Hawaii are looking up and bidding fair to occupy a place of considerable prominence in the horticultural world is evidenced by the appearance of a special bulletin No. 14 on the Marketing of Hawaiian Fruit. This is accompanied by two press bulletins, both very interesting, on fruit marketing investigations in 1907-8. The three bulletins are by J. D. Higgins, Horticulturist of the Hawaii Experiment Station, formerly of Cornell University.

ITALIAN LEMONS AND THEIR BY-PRODUCTS

BULLETIN 160, BUREAU OF PLANT INDUSTRY

This Bulletin is devoted to the Italian lemons and their by-products. It is by G. Harold Powell and E. M. Chace. The Bulletin shows that the lemon industry in Italy comprises the planting of some 8,000,000 trees. Three-fourths of these are in Sicily and the remainder in the Sorrentine peninsula. The exports of fresh lemons from Italy have increased regularly during the past ten years. In 1907, 559,000,000 pounds were exported. Of these from 30 to 40 per cent. come to the United States. The remainder is distributed in the United Kingdom and in Europe.

Among the principal by-products are citrate of lime, lemon oil, lemon juice and lemon peel. The low grade lemons are utilized in this way. It is astonishing to find that over one million dollars worth of oil of lemon, orange and other citrus fruits are exported by Italy each year. In 1908, the United States imported lemon oil to the value of nearly \$600,000.

The lemon orchards of Italy are very variable in size. Very frequently they represent only a few trees set in garden areas, although occasionally the individual plantings cover extensive areas. The trees are set from 8 to 18 feet apart. In the northern part of the country the yield is much smaller than in the south. Frequently the trees are trained on horizontal trellises and secondary crops grown beneath. Sometimes occasional walnut trees are grown through the trellis, utilizing the sunlight above. The terraced regions of the Sorrentine peninsula are among the more interesting and picturesque sections of the lemon country and catch the eye of the tourist who is usually attracted to the picturesque Amalfi drive, one of the historical highways of the world. The cost of producing lemons in Sicily is about one-half of that expended on the same area in the United States. This is probably the strong argument in favor of imposing a heavy duty on the lemon.

WE OFFER one year's subscription to the NATIONAL NURSERYMAN and one copy of Webster's New Illustrated Dictionary, 1,100 pages, limp leather binding, red edges, round corners, for \$2.50. The Dictionary is a condensed Encyclopedia, containing all the information required by the business man. This offer holds good on renewals or advance subscriptions. Dictionary itself retails at \$2.50.

NATIONAL NURSERYMAN
ROCHESTER, NEW YORK

WANTED

Peach Seed, Currant, Gooseberry and Poplar Cuttings
State price and amount you can furnish

OAK HILL NURSERIES, Franklin, Mass.

Wanted March 1st

Position as Foreman in Nursery by man having 20 years' experience in propagating and growing a general line of Nursery Stock and Ornamental Shrubbery. Best of references furnished. Address, EXPERIENCE, care National Nurseryman.

WANTED—PARTNER

With \$7,000 to \$10,000 to take half interest in one of the best nurseries in a Central Northern State. Our business is too large for the present company. Must have knowledge and skill to handle the office end of a canvassing and catalogue business. Or will sell the whole plant at a reasonable price on favorable terms.

Address "Partner" care of National Nurseryman

WANTED

A capable married man preferred, to take charge of a Nursery and Fruit Farm in the Province of Quebec. Must understand the propagation and cultivation of Nursery Stock and be qualified to manage large and small fruit orchards. An excellent opportunity for the right man. Apply stating age, experience, salary expected, etc., to C. S. CLARK, Box 278, Montreal, Quebec, Canada.

WANTED--Grafters

Permanent work to experienced men who are skillful budders, or grafting at our plants, at Dansville, N. Y., Rolla, Mo., Farmington, Ark. and Louisiana, Mo. Address nearest office.

STARK BRO'S NURSERIES & ORCHARDS CO.

WANTED

Experienced Nurserymen. Good wages, steady work.
Chance for promotion.

VINELAND NURSERIES CO., Clarkston, Wash.

ESTABLISHED IN 1897

EM. Van ESPEN, President

CENTRAL PHOSPHATE COMPANY

Miners of High Grade Florida, Tennessee and South Carolina Phosphate; TENNESSEE RAW GROUND
PHOSPHATE ROCK, all grades

Address

MT. PLEASANT, TENNESSEE and 18 CHAUSSEE D'ANTIN, PARIS, FRANCE

WANTED--March 15.

A Nurseryman of experience in packing and grading and also a herbaceous man. CHAS. R. FISH & CO., Worcester, Mass.

LAFER'S INSECTICIDE

Will destroy Scale, Insects, Grubs, Borers, Root Aphid and Blight on Fruit Trees, etc., by absorption by roots, producing inoculation of the sap. Work guaranteed. Free pamphlets. J. W. LAFER, Station B, R. F. D. No. 2, Box 2 A, Toledo, Ohio.

FOR SALE--Western Nursery

Forty acres of deeded and forty acres of leased land. Stock all salable size; clean and healthy; not a scale or bug. Trade has almost doubled each year. We ship 5 to 12 hundred miles west and north of us. Trade to be supplied unlimited. We have a complete general line of Nursery Stock. We do a strict catalogue business. Are well advertised and have a good name.

Will sell for cash, or part cash and time on balance to a man who knows his business and is a pusher. This is a good investment and will pay a good dividend. Address

"NURSERYMAN"

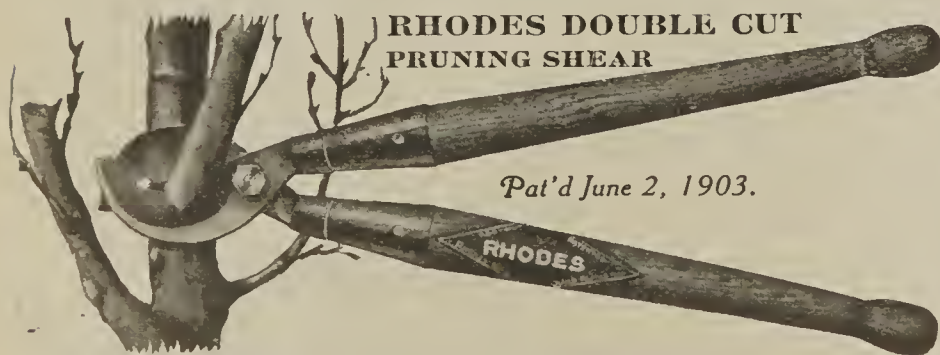
care of NATIONAL NURSERYMAN, this office.

Quality First!

CONCORD VINES A SPECIALTY

Extra heavy grades in two-year and one-year stock.
We are vineyardists as well as nurserymen.

N. G. & J. T. MERRITT, Dunkirk, N. Y.



RHODES DOUBLE CUT
PRUNING SHEAR

Pat'd June 2, 1903.

The only pruner made that cuts from both sides of the limb and does not bruise the bark.

MADE IN ALL STYLES AND SIZES

We pay Express charges on all orders.

Write for circular and prices.

RHODES MFG. CO., Grand Rapids, Mich. Dept. M.

WANTED--

A live man, not afraid of work, who can bud, graft or do any kind of work in a Nursery, especially the handling of fruit trees, but would prefer one who had experience in handling ornamentals as well.

"Worker" care of National Nurseryman

Apple Seedlings! Apple Seedlings!

In large quantities, graded and ready for immediate shipment. Grown in our Indian Lake Nursery
2 1-2 miles south of Mankato

Gjestrum Olinger & Evans

Wholesale Nurserymen - - MANKATO, MINN.

FOR SPRING OF 1910

We have our usual supply of NURSERY STOCK
We still have a few hundred thousand Scions to offer
John A. Cannedy Nursery and Orchard Co.
Carrollton, Ill.

HEADQUARTERS FOR

Pure Speciosa Catalpa and Black Locust Seedlings

Write for Prices

COOPER & ROGERS, Winfield, Kansas

WANTED!

A position with a first class nursery. Experienced in selling and handling mail order correspondence. Also in propagating and general nursery work.

Address: RELIABLE, care of National Nurseryman

Wanted---SMALL ORNAMENTAL STOCK

for lining out. Also Pear 1 1-2 to 2 inch; Cal. Apple, 1 1-2 to 2 inch. Large Carolina Poplars and Elm

BEAUDRY'S NURSERY CO.

1747 Railway Exchange

Chicago, Illinois

Waxahachie Nursery Company

Waxahachie, Texas

28,000 Peach, 1 to 2 feet	31,200 Peach, 2 to 3 feet
The above in twenty-four varieties. Nice clean stock.	
7,000 Plum, 1 to 2 ft.	5,000 Plum, 2 to 3 feet
4,000 Pear, 3/4 to 1 inch	5,000 Pear, 5/8 to 3/4 inch
4,000 Pear, 9-16 to 5/8 inch	Bartlett, Clapp's Duchess,
Flemish Beauty, B. de Anjou	1000 Kieffer, 4 to 6 feet
2,000 Kieffer, 2 to 3 feet	
5,000 Cherry, 1 to 2 feet	5,000 Cherry, 2 to 3 feet
7,000 Cherry, 3 to 4 feet	3,000 Cherry, 4 to 6 feet

One Year. Fine Roots. Clean.

5,000 Surplus Roses Strong Dormant Buds
One Year, 2,000 American Beauty

Let us quote you on the above. Correspondence solicited.

WAXAHACHIE NURSERY CO., Waxahachie Texas

Our Guarantee is just as big and broad as YOU choose to make it.

“SCALECIDE”

applied to your fruit trees will absolutely kill SAN JOSE SCALE and all Fungous troubles controllable in the dormant season. Five years of proofs.

Prices: In barrels and half barrels, 50c. per gallon; 10 gal. cans, \$6.00; 5 gal. cans, \$3.25; 1 gal. cans, \$1.00. If you want cheap oils, our “CARBOLEINE” at 30c. per gallon is the equal of ANYTHING ELSE. Send today for free Booklet. “Orchard Insurance.”

B. G. PRATT COMPANY, Mfg. Chemists, 50 CHURCH ST., NEW YORK CITY

ROSES - SHRUBS - CANNAS - PHLOX
JAPANESE IRIS - HERBACEOUS PAEONIES

ALL FIELD GROWN

Teas, Hybrid Teas, Hybrid Perpetuals, Mosses, Rugosas, Climbers, Ramblers Creepers. Thirty Types. Over Three Hundred Varieties.

Planting for the season of 1909-1910 is the heaviest in our history. Varieties are the BEST and QUALITY is there, better than ever before.

We want to figure with you Mr. Nurseryman on your future orders. We have the goods—QUALITY—QUANTITY—VARIETY—and can make the prices! Your correspondence will get “quick” action.

The United States Nursery Co.

RICH, Coahoma County, MISS.

Osage Hedge, One Year Extra Fine

Grown for us at Rossville, Kansas on deep sandy soil. Famous for fine roots.

This Osage Hedge in Car Lots, cannot fail to please. BLACK LOCUST, RUSSIAN MULBERRY, HONEY LOCUST.

SPECIOSA CATALPA, Selected seed, guaranteed pure, our specialty for past ten years, grown by the million.

FANCY SHADE TREES CAR LOTS. Ash, Box Elder, Black Locust, Catalpa Speciosa, American White Elm, Soft or Silver Maple.

The Winfield Nursery Co.

(INCORPORATED)

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WINFIELD, KANSAS

YOUNGERS & CO.

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APPLE TREES

Shade and Ornamental Trees

Russian Golden Willow

SEEDLINGS CATALPA SPECIOSA

HONEY LOCUST OSAGE ORANGE

Flowering Shrubs and Evergreens

Write for prices

J. H. SKINNER & CO.

Station “A,” Topeka, Kansas.

Fruit, Shade and

Ornamental Trees

∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

ESTABLISHED 1868

F. W. MENERAY

Crescent Nursery Co.

COUNCIL BLUFFS, IOWA

We offer our large stock of PAEONIES at a special low price for Fall 1909 and Spring 1910. Also a large stock of Cherries, Plums, Pears, Gooseberries, Deciduous Trees and Ornamental Shrubs.

SPECIAL ATTENTION—Complete list to dealers in car-load lots.

Established 1780.

Andre LeRoy Nurseries

BRAULT & SON, Directors

ANGERS, FRANCE,

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California Privet

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Successors to J. C. Hale

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Japan Persimmon, Japan Walnut,
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We also offer a general line of Nursery Stock, including Fruit and Ornamental Trees, Shrubbery, Field-Grown Roses, Etc., Etc. Prices always right.

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Trees That You Can Sell "On Honor"

Your professional reputation depends upon the trees you sell. An order of "named" trees that turn out to be something else will often do you untold injury. Doubtless you have often found it difficult to secure "true-named" specimens, which require to be grown in the South. But here is a satisfactory solution of this difficulty: Trees from

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HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
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We grow everything required for Orchard, Garden,
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Azaleas, Rhododendrons, Clematis, Roses, Pot-grown
Plants for forcing. Buxus, Conifers, Japanese
Maples, Shrubs, Palms, Bulbs, Etc.

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FOR THE NURSERY TRADE

SPRING 1910

**Black and Purple Raspberry Tips
Gooseberry Layer Plants**

Red Raspberry, Blackberry, Dewberry, Strawberry,
Rhubarb, Asparagus and Horseradish
Orange-Quince and Gooseberry Cuttings
Everything in Small Fruit Plants

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Specialties for Fall 1909

Japan Pear Seedlings; California Privet---Fine Plants.

Special Inducements in Carload Lots

Cherry, 1 yr., none better; Std. Pears, 2 yr., most all varieties; Dwarf Pears, 2 and 3 yr., Angouleine; Quince, 2 yr., Champion, Orange, Meeches & Reas, exceptionally fine lot; Japan Walnuts, 2 to 3 to 5 to 7 ft., extra good; and

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Correspondence Invited.

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APPLE TREES, assorted, all grades.

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GRAPE VINES, assorted.

A large and complete assortment of Shade Trees
APPLE AND FOREST TREE SEEDLINGS

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Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
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Small Fruits	Syringaeas	Fruit Tree "
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Maple Schwedlers	Honey Suckle	Etc., Etc., Etc.
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Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

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PEACH—One Year and June Buds. We invite inquiries NOW from buyers of June Budded peach, plum and apricot. We will bud especially to suit YOUR particular wants.

PLUM—De Soto, Wyant and Japanese varieties.

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

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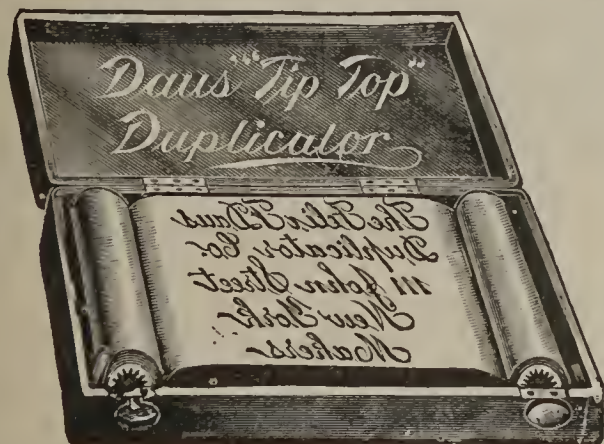
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420 ACRES

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FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
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WHOLESALE SEEDSMEN
at GROSSTABARZ, Thuringia, GERMANY
are prepared to accept contracts on the following
Specialties for

DELIVERY FALL 1909

FRESH SEEDS of MULBERRY, WILD CHERRY,
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PEAR, DOG ROSE, BLACK AND HONEY
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Price List on application
WANTED: American Evergreen Tree Seeds
Offers will oblige

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W. C. REED, Prop., - VINCENNES, IND.

OFFER FOR FALL 1909

Cherry 2 Year in Car Lots

Cherry 1 Year in Car Lots

Our Cherry promises very fine both in 1 and 2 year.
Also general line of other Nursery Stock.

Cherry Buds to offer in any quantity in season ready
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FRUIT AND SEED FARMS

OFFER for Fall 1909 and Spring 1910

GRAPE VINES—One and two years old. Varieties
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Also Scarlet or Crimson Clover Seed and Cow Peas.
Free from weed seeds, all recleaned and guaranteed
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10-gal. keg making 1,500 gals. Spray; delivered at any
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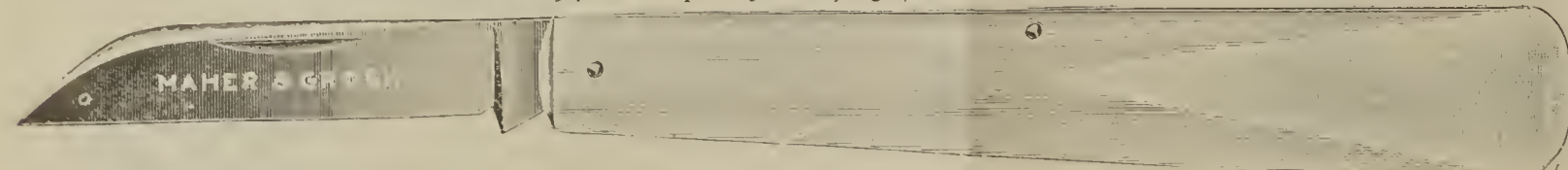
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Hand Forged Razor Steel Warranted



BUDDING KNIFE No. 94. Sample by mail, 25c; 6 for \$1.25.



PROPAGATING KNIFE No. 89, 50c. Blade Closes; White Handle. Same Handle, but with Budding Blade, same price

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Nursery Pruner, 50c
Pocket Pruner, 60c
Pocket Budder, 35c
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We solicit Direct
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Send for 12-page Special
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When writing to Advertisers mention The National Nurseryman.

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NURSERIES AT USSY, CALVADOS, FRANCE

A general assortment of Fruit Tree Stocks, such as Apple, Pear, Myrobalan Plum, Mahaleb and Mazzard Cherry, Angers Quince, etc. Forest Trees, Ornamentals, Evergreen Seedlings, Roses, etc. The largest stock in the country. Prices very low. The very best grading and packing. Send for quotations before placing your orders elsewhere. Catalogue free.

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America's greatest grape authority.

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We are the largest growers to the trade in above line on the Pacific coast. Plants are packed lightly and successfully shipped anywhere. Write for wholesale price list at once.

G. H. HOPKINS & SON, Burbank, Calif.

200,000 Cherry Trees

One and Two Years; vigorous, healthy, at right prices—
all "BAGBY" grown—none better.

A Full Line of Other Nursery Stock

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Japan Pear Seed

We have a limited quantity of Japanese Pear Seed of this season's crop and the seed is of the best quality.

The value of Japanese seed is well known—one of our customers uses about 200 pounds every year and finds it far superior to the French Seed as the grafts two and three years old will make nearly double the French in growth.

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Our price-list of young ornamental stock for lining out this year comprises a vast assortment of young stock suitable for planting in Nursery rows and first class in every respect, with prices that are right. Just what you want. The list is now ready. Have you a copy? If not let us know and we will gladly send it to you.

We grow an exceptionally fine grade of plants, true to name. Nurserymen and growers all over the country buy our young stock. Why? Because our plants give results and a good return for their investment. Our sales every year amount to over a million plants.

Send for the list at once so that you may place your order early and have your wants reserved for you. Remember this is an interesting list and the stock goes fast.

THOMAS MEEHAN & SONS, Inc.

Wholesale Nurserymen

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LEVAVASSEUR & SONS, Nurseries at Ussy and Orleans, FRANCE

Wholesale Growers of Fruit Tree Stocks, Ornamentals, Evergreen Seedlings, etc. Best Grading Quality, and Packing. Largest shippers to this country. All leading nurserymen are our regular customers. Orders booked now for delivery for season of 1910. Compare prices quoted in last Trade list. For catalogues and price list address us or our

American Agents, AUGUST RÖLKER & SONS, New York, 31 Barclay Street or P. O. Box 752.

Two Splendid ROSE NOVELTIES

Raised by JACKSON DAWSON
NOW OFFERED FOR SALE FOR THE FIRST TIME

LADY DUNCAN

Rosa Wichuraiana fertilized with Rosa rugosa. Absolutely hardy.

WINNER

of the Silver Medal of the Massachusetts Horticultural Society 1900. One of the finest hardy ramblers ever raised.



Has the prostrate long rampant growth of the mother, while the Rugosa blood shows in the foliage, spines and flowers, the petals being a warm, lively pink and making a delightful contrast to the yellow stamens.

DAYBREAK

Wichuraiana type, formerly known as seedling No. 7 (Wichuraiana × The Dawson). A vigorous grower, profuse bloomer and easy forcer. Foliage light yellowish green. Hardy as far north as Canada.

Flowers single, in loosely pyramidal clusters. Color deep yellowish pink, a shade darker than Lady Duncan, slightly lighter tint towards centre. Stamens very bright orange. Flowers full, round, cupped.

Every Nurseryman and Easter Plant Forcer will want these two new Roses.

\$1.00 each. \$10.00 per dozen

STOCK LIMITED, ORDER NOW FOR PROMPT DELIVERY.

We carry a very large stock of fine Conifers, Deciduous Trees and Shrubs and Hardy Herbaceous Perennials.

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Progressive firms advertise, not because they want to spend money or make a show, but because it pays them. Cob-web concerns, hookwormers, and business stagnators are mere tombstones in the business world and in time their business will rot away no matter how much wealth they may possess.

Now will you patronize advertisers or hookwormers? Do you want to do your little share for the good of the trade, or will you continue to buy from some cob-web concern just because you have done so for the last fifteen years?

We believe in advertisers, in those working for the trade, in better bulbs, plants and nursery stock, and in the square deal. If you think we are right, and believe with us, write us when you are interested in our goods.

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Representing Seitaro Arai, Yokohama

Japanese Bulbs, Plants, Nursery Stock, Etc.



NOT HOW CHEAP
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FOR FALL 1909

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We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

The Willadean Nurseries
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Hardy Perennials, Paeonies, Iris, Hardy and Tender Water Lilies and Aquatics, Hardy Vines and Climbers, Decorative Greenhouse Plants, Palms, Ferns, Ficus, Araucarias, etc.

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HARDY NEW ENGLAND GROWN NURSERY STOCK

WE grow a general assortment of Trees, Shrubs, Vines, Roses and Herbaceous Perennials, Etc. Prices reasonable. Wholesale Trade List for the asking.
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Grower and Exporter of Fruit-Tree Stocks, Forest Tree Seedlings, Rose Stocks, Shrubs, Vines, and Conifers for Nursery Planting.

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NEWARK, N. Y.

100,000

California Privet

EXTRA STOCKY PLANTS, 2 YEARS

They go quick at bargain prices.

ARCADIA NURSERIES
Monticello, Florida

FINE TEXAS UMBRELLA

GENUINE
with perfectly
formed tops

JOHN A. YOUNG

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FOR SALE

50,000,000 Strawberry Plants

ORDER NOW FOR FALL

I want every grower to investigate my new "Tennessee Favorite,"—The very best berry grown for the market,—size color, flavor and shipping qualities considered. Even in size throughout season. I picked and sold from one acre 4,456 quarts at a net profit of 11 cents a quart making a total profit of \$491.16 in the Spring of 1908. For the season of 1909 I shipped 194 crates per acre, which net \$2.52 per crate. To vouch for the truth of this statement, I refer anyone to M. Fugazzi & Co., Cincinnati, Ohio, who handled these shipments.

In my thirty years' experience I have found nothing quite its equal. Does best in low, strong land. Try them. Other varieties, Aromas, Klondyke, Lady Thompson, Excelsior.

A. HORN, R. F. D. 3, Soddy, Tenn.

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The Benjamin Chase Co **Derry Village, N.H.**

Ben Davis

Germans to the Front! **J. Heins' Sons, Halstenbek**

No. 151, near Hamburg

The **LARGEST NURSERIES IN EUROPE** SHIPMENTS OF 150 MILLION PLANTS ANNUALLY
 Immense quantities of Fruit Stocks, etc. Viz:

Prices on Application

APPLE. 1 yr. ca. $\frac{5}{8}$ millimeter diam.
 " 1 " " 3-5 millimeter diam. or ca. 8-16 inch high
DOUCIN transpl. ca. 6-10 millimeter diam.
MYROBELLA PLUM. 1 yr. ca. 5-10 millimeter diam.
MAHALEB. 1 yr. ca. 5-10 millimeter diam.
QUINCE transpl. " 6-10 " "

PRUNUS St. Julien. 1 yr. ca. $\frac{5}{8}$ millimeter diam.
DOG BRIARS. 1 yr. ca. $\frac{5}{8}$ millimeter diam.
SYRINGA VULGARIS transpl. ca. 8-12 millimeter diam.
THORN QUICKS. 1 yr. ca. 12-24 inch high.
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All prices quite nett, against cash with order.

All from **SANDY** soil, **FIBROUS ROOTED** and of **EXCELLENT QUALITY.** Also **Forest and Hedge Trees**, viz: **Alder, Maple, Sycamore, Birch, Beach, Hornbeam, Hazel, Common Ash, American Ash, Black Walnut, Privet, Canadian Poplar, Common Oak, Red Oak, Swamp Oak, Elm, Red Cedar, Limes, Abies arizonica, Silver Fir, Europ. and Japan. Larch, Spruce Fir, Blue Spruce, Sitka Spruce, Banks Pine, White Pine, Scotch Fir, Douglas Fir, American Arborvitae**, etc., etc., all well grown trees, first rate quality at very low prices. Best shipping facilities **via Hamburg** at **lowest freight** through our American Shipping Agents: **Alfred H. Post & Co., New York Maritime Building.**

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The Best Cropping Raspberry Known



It Sells for Twenty-five Cents a Quart

The Superlative Raspberry

THIS is an English variety of great merit, which has been cultivated very successfully in this country. Superlative is a decided improvement in Raspberries. It is three times as large as the Cuthbert, heretofore considered the largest sort in existence. "Superlative" is a thrifty grower with smooth canes, 5 to 6 feet tall, which need no support. It is a truly everbearing variety. The berries are pointed, of bright scarlet color, very sweet and juicy. Withal, it is a firm shipper. Truly, a twentieth century berry, which is well worth wide distribution on account of its sterling qualities and unique characteristics. **SEND FOR BERRY CATALOGUE.**

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Apple Seedlings

We have some surplus, both *American and French* grown. All grades for grafting and budding.

IMPORTED FRUIT TREE STOCKS

Now arriving—Cherry, Pear and Plum Stocks

ALL GRADES

Apple Grafts

Piece and Whole Root

ORDER QUICKLY

Also a complete line of General Nursery Stock; mostly in storage.

SEND LIST FOR PRICES

WANTED---APPLE SCIONS

Shenandoah Nurseries

D. S. LAKE, Prop.

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Choice Nursery Stock for Spring 1910

including

APPLES, CHERRY, PEACH, PLUM,

PEAR, GRAPES, SMALL FRUITS,

FOREST SEEDLINGS and SHADE TREES

SHRUBS and ROSES

Send us your list of wants and let us make
you prices.

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25,000 Two Year Cherry Trees for Spring 1910

Our Cherry Trees were sprayed several times during the summer and held their foliage until Fall. They have nice straight body without any knots or scars and well formed heads, with good system of roots. This is an ideal lot of trees every way.

VARIETIES—Montmorency, May Duke, Ea. Richmond, Olivet, Dyehouse.

Heavy on MONTMORENCY. Fully half will run 3-4 inch up, balance 5-8 to 3-4, 5 to 6 feet.

Inducements made on early orders.

Parties wanting Cherry Trees can save money by corresponding.

Marble City Nursery Co.

Knoxville, Tenn.

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have full list of varieties for fall trade with special inducements for orders for late fall
delivery in car lots, or cellared for Spring if desired. Our facilities are unsur-
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Not satisfied with our present large cellars, are now build-
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of present brick cellar.

OUR SPECIALTIES ARE

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H. P.

Moss

Ramblers

Climbers, Etc.

PEACHES

PEARS

PLUMS

CHERRIES



RHODODENDRONS

Ornamental
Trees and
Shrubs in
Car Lots

Weeping Mulberries
Elm and Ash

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Ampelopsis

Paeonies

Hydrangeas, Bush
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NO TROUBLE TO PRICE YOUR WANTS

55 Years

1200 Acres

44 Greenhouses

THE STORRS & HARRISON CO.

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Deutzia Lemoinei

Is one of the choicest small shrubs, covered
in the blossoming season with a
profusion of white flowers

We Have a Large Stock

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Apple Seedlings

All Grades

Shipment from

TOPEKA, KANSAS, or
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Write for Prices.

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APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
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W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

IN CAR LOAD LOTS

We offer BIOTA AUREA NANA, Cedrus, Deodara, Junipers
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Figs, Spanish Chestnuts,
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Philadelphus, Spiraeas,
Weigelas, and other De-
ciduous Shrubs.

Ashes, Elms, Maples,
Weeping Mulberries,
Tulip and Lombardy Pop-
lars, Lindens and Texas
Umbrellas.

Strong field grown ROSES,
Standard sorts, budded
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Citrus Trifoliata, Amoor
and California Privets.

AZALEAS, Camellias,
Magnolia Grandiflora,
and other Broad-leaved
Evergreens in great va-
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Fruitland Nurseries
Established 1856

AUGUSTA, GEORGIA
Over 450 Acres in Nurseries

TWO SPLENDID ROSE NOVELTIES

Raised by JACKSON DAWSON now offered for sale for the first time

Lady Duncan Rosa Wichuraiana fertilized with Rosa rugosa. Absolutely hardy. **WINNER** of the Silver Medal of the Massachusetts Horticultural Society 1900. One of the finest hardy ramblers ever raised. Has the prostrate long rampant growth of the mother, while the Rugosa blood shows in the foliage, spines and flowers, the petals being a warm, lively pink and making a delightful contrast to the yellow stamens.

Daybreak Wichuraiana type, formerly known as seedling No. 7 (Wichuraiana × The Dawson). A vigorous grower, profuse bloomer and easy forcer. Foliage light yellowish green. Hardy as far north as Canada.

Flowers single, in loosely pyramidal clusters. Color deep yellowish pink, a shade darker than Lady Duncan,, slightly lighter tint towards center. Stamens very bright orange. Flowers full, round, capped.

Every Nurseryman and Easter Plant Forcer will want these two new Roses
STOCK LIMITED, ORDER NOW FOR PROMPT DELIVERY.

We carry a very large stock of fine Conifers, Deciduous Trees and Shrubs and
Hardy Herbaceous Perennials.

EASTERN NURSERIES

HENRY S. DAWSON, Mgr.

JAMAICA PLAIN, MASS.

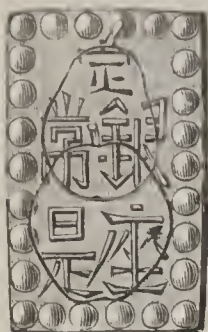
A NEW BERRY HIMALAYA GIANT

THIS new berry is a new arrival from the north slope of the Himalaya mountains, 6,000 feet above the sea level. It is black but not a blackberry. For many centuries the natives of that country have been making wine of it and only the recent invasion by British troops has brought this delightful, luscious fruit to our civilization. The vine is a vigorous grower, making a growth of from 20 to 30 feet in one year which can be trained on a fence or arbor similar to grape vines. The enormous clusters of large sized berries ripen all summer making the Himalaya the most productive of all varieties known. They have no core and the flavor is sweet. Of unusual richness and when ripe will literally melt in your mouth. For pies and jellies, the Himalaya berry is a perfect success being ahead of any similar fruit. The severity of their native climate has made the berries hardy and both plant and fruit will stand extremes of heat and cold better than any other variety. It is hard for you to realize what a treat a dish of these new berries would be. We believe they will be in great demand as soon as they are known and enough grown in the United States to supply the demand. There has never been a kick from parties growing the Himalaya, but all praise it above all other berries and say its the finest berry ever introduced. A Mr. Minor picked from two plants in 1908, \$31.00 worth of berries at 5 cents per quart. In 1909 he picked over \$54.00 worth. The Himalaya is no dead wood but fruits on the same wood for years. But it is necessary to prune some of the old and young wood away each season, as it makes a heavy growth of wood each season. One plant in one year will give from 25 to 50 young plants a season, the first season. (The truth is hard to believe). Send for descriptive catalogue today. **THIS BERRY WILL STAND 30 DEGREES BELOW ZERO.**

Berrydale Experiment Gardens
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Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries

Huntsville, Ala.

JESSIE S. MOSS, Prop.

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PEARS—Bartlett and Beurre de Anjou, one year, in large supply. As fine in quality as ever grown.
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See Price List for particulars.

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& Co.

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BUT HOW GOOD

HAVE you seen and examined the quality of our waterproof rawhide shipping tags and tree labels? This stock is



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BLANK
AND
PRINTED.
SINGLE AND IN
GANGS OF
FOUR AND SIX.

especially adapted to hard usage and outside use. "Once used, always used." Send for samples and prices. Our refer-

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BLUE SPRUCE, all sizes, 2 to 7 feet.
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FLOWERING SHRUBS, 350 varieties.
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HEDGE PLANTS, 25 kinds.
HARDY VINES and CLIMBERS, 75 varieties.
PLANTS and TRAILING VINES, 12 varieties.
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DECORATIVE and FLOWERING PLANTS, 50 varieties.
TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries, Pears, Apples, etc.
SMALL FRUITS, 75 varieties.
NEW and RARE TREES, SHRUBS and EVERGREENS, 35 varieties.
MISCELLANEOUS NEW and RARE PLANTS and VINES, 25 varieties.
HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.
NEW and RARE CHOICE HARDY PERENNIALS, 65 varieties.
ORNAMENTAL GRASSES, 30 varieties.
HARDY FERNS, 50 varieties.

ASK FOR WHOLESALE CATALOG

VISIT NURSERIES

BOBBINK & ATKINS,

NURSERYMEN AND FLORISTS,

RUTHERFORD, N. J.

The Farmers Nursery Company

OFFER

APPLE, assorted, heavy in light grades |
 PEAR, Standard, assorted, extra fine lot of Kieffer
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 PLUM, Japan and English, good assortment of
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ARBOR VITAE, 2 to 8 ft.
 NORWAY SPRUCE, 2 to 8 ft.
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 BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are
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Silver Maple, Am. Elm, C. L. W. Birch, all sizes
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Catalpa Spec. Seedlings, all grades. Golden Wil-
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Stock grown at Dansville, N. Y. and Troy, O.

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FREMONT, NEBRASKA

Offer a General Line of Nursery Stock

APPLE, Keiffer and Garber Pear, Peach,
 Cherry and NATIVE PLUM

Our Native Plum are extra heavy and fine

GRAPES, Small Fruits, Shrubs

And a large line of

Forest Tree Seedlings

A FINE LOT OF SHADE TREES

W. FROMOW & SONS

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Offer 250 acres of Hardy Outdoor Nursery Stock in great
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Hardy Named Rhododendrons in such varieties as Ever-
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 S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the
 Parson's Hybrids.

Andromeda Floribunda, 20,000 to offer in bushy well
 grown plants 6 in. to 18 in.

Andromeda Japonica 6 to 18 in.

Azalea Mollis, seedlings from named varieties 4 to 24 in.

Ghent Azaleas, on own roots 12 to 24 in.

Azalea Pontica, the common yellow 12 to 30 in.

Gaultheria Shallon and Procumbens.

Kalmia Latifolia 6 to 30 inches.

Hybrid Tea, Tea, Polyantha and Hybrid Perpetual Roses,
 strong field-grown stock as Standards, Half Standards and
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Copper Beech, selected seedling, specially good strain 3 to
 9 ft.

Fruit Trees, trained, Espalier and Fan shaped.

Box, Handsworth and Common Tree 6 in. to 5 ft.

Retinospora Plumosa and Plumosa Aurea 6 in. to 6 ft.

Retinospora Obtusa compacta 6 in. to 5 ft.

Abies Orientalis, Parryana, parryana Glauca and Kosteriana
 6 in. to 4 ft.

FOR DELIVERY FALL 1910

We are within an hour's rail ride of London, and shall
 welcome the personal inspection of any Nurseryman visiting
 England. We shall not importune you to buy, the quality
 of our stocks will ensure business. Send orders timely to
 our sole agents for U. S. A. and Canada.

AUGUST ROLKER & SONS,

31 Barclay Street, P. O. Box 752, New York

Franklin Davis Nursery Co.

Baltimore, Maryland

We offer for Fall 1909 and Spring 1910---

Apple, 1 and 2 year, leading varieties.

Pear, Standard, Keiffer, Blight Proof, Koonce, Garber,
 Etc., Etc.

Peach, 1 year, standard varieties.

" 2 " June Buds.

Cherry, 1 and 2 year on Mahaleb.

Asparagus, best leading kinds, 1 and 2 year.

Privet, California, 1 and 2 year, fine.

" Ibota, 1 and 2 year.

Strawberry Plants, best varieties.

Grape Vines, 1 and 2 year; heavy on 1 year Concord.

White Birch, 10-12 ft., fine.

Silver Maple, 10-12 ft., 8-10 ft., 7-8 ft.

Sugar Maple, 8-9 ft., 7-8 ft.

Norway Maple, 7-8 ft., 6-7 ft.

Poplars, Lombardy & Carolina, 1, 2 and 3 year.

Catalpa Speciosa, 8-9 ft., fine.

Weeping Willows, 8-9 ft., fine.

Oriental Planes, 8-9 ft., fine.

We have a fine lot of Extra Heavy Shrubs,
 such as Hydrangea P. G., Weigelas, assorted;
 Altheas, assorted; Judas Trees, Spireas, assorted;
 Eulalias, Snowballs, Lilacs, Strawberry Tree.

In large Shade Trees we have Sugar Maples,
 Elms, Box Elder, Catalpas, Evergreens, Roses,
 Etc., Etc.

Would accept orders to bud Peach on contract.
 Can commence shipping October 1st, or earlier.

Send us your want list.



1. *Azalea viscosa* 2. *Azalea nudiflora* 3. *Azalea vaseyi*
 4. *Azalea lutea* 5. *Azalea arborescens*

The Hardy Native American Azaleas as grown at the Highlands Nurseries.

The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK

National Nurseryman Publishing Co., Incorporated.

Vol. XVIII.

ROCHESTER, N. Y., FEBRUARY, 1910

No. 2

THE HIGHLANDS NURSERY

Situated in the Mountains of North Carolina with Branch at
Salem, Massachusetts

Whose Motto is "American Plants for American Planters"

Proprietor, Harlan P. Kelsey, Salem, Massachusetts



While not discouraging the importation of the best plants which foreign countries offer, the NATIONAL NURSERYMAN has frequently advocated and consistently stands for the relatively greater value of American plants as a whole for American conditions than any exotics that may be introduced. Critics of this statement may cite some important exceptions and point to the remarkable

interest in purely native plants. The story of the growth of this nursery is exceedingly interesting. It is in effect the story of the life work of a man convinced that North America has a wealth of native plants unsurpassed by that of any other country and that these as a whole are better adapted to our own soil and climatic conditions than any which can be introduced.

The proprietor of the Highlands Nursery, Harlan P. Kelsey, was at one time the youngest nurseryman in the country for he issued his first catalogue when but twelve years old!

His interest in plant culture arose with the earliest awakening of interest in the organic kingdom. This Highlands Nursery with its headquarters in the



Rhododendron catawbiense at 5,000 feet elevation western North Carolina. Mt. Mitchell 6,600 feet, the highest point east of the Rockies in the distance.

examples of the immediate adaptation of a few oriental plants, to American soil and climate, and we shall accept the amendment

without demur. But when the whole situation is carefully considered we cannot fail to see that these are the exceptions and that they by no means rise to the dignity and importance of the rule. We are to remember also that not all plants imported from Europe are of European origin. Many of our valuable conifers for instance are of American origin but simply propagated in Europe owing to the enabling economic conditions. For these reasons we have great pleasure in presenting a descriptive sketch of a nursery that for a quarter of a century has labored consistently and intelligently for the spread of in-

mountains of North Carolina at an elevation of 3800 feet, and with all that such an elevation means in the way of developing hardiness in the stock grown, began with an area of about half an acre in extent some twenty-five years ago. The Nursery made its debut, its bow to the public, by introducing the then newly discovered and exquisitely beautiful native plant, Azalia Vaseyi, named



Harlan P. Kelsey, 1900.

after the great agrostologist and botanist of the U. S. Department of Agriculture. Coupled with this plant was a harmoniously beautiful partner, one of the handsomest of our American evergreens, Carolina Hemlock *Tsuga Caroliniana*. These two with half a dozen or more native trees and shrubs formed the offering of this juvenile nurseryman. This half acre has extended year by year until there are now over one hundred acres in the north Carolina nursery exclusively devoted to the cultivation and propagation of wild flowers and plants. These half dozen species have been multiplied by one hundred until at the present time there are over six hundred species of plants native to the Appalachians and Northeastern United States. This growth has been made possible by intelligent study of the

splendid assortment of the trees and shrubs which nature has distributed over this interesting region. The elevation of the Highlands Nursery is 3800 feet. In plain sight from the grounds are Grandfather Mountain, 6000 feet, and Mitchell Mountain, 6600 feet, the latter holding the distinction of being the highest point east of the Rockies. This region is the home of *Rhododendron catawbiense*, called by Mr. Kelsey the finest of all the broad leaved evergreens. In this section also abound *R. maximum* and *R. punctatum*. Here it is that seeds and small plants collected are grown and cultivated under systematic management for the purpose of developing good root system and symmetrical form of top. These plantings occupy an area of 100 acres and comprise over 600 species.



A View of the Salem Branch of the Highlands Nursery.

qualities, uses and adaptations of the plants themselves. Not only is the most solicitous consideration given to the selection of the best types and varieties but much thought is given to the growing of the plants, to the end that only the best quality of stock is produced. The story of the growth of the business would in effect largely be the story of the popularization of such noted plants as the hardy azalias, the magnificent rhododendrons, together with many other broad-leaved and coniferous evergreens, graceful climbers, handsome ferns and attractive flowering herbaceous plants.

NURSERY HEADQUARTERS

1. *Mountains of North Carolina.*—The headquarters of the Highlands Nursery is established in the region where the natural flora is the richest in Northeastern America. It lies in the Allegheny regions of North Carolina, and although somewhat remote is not inaccessible. The varying elevations furnish conditions which permit of the cultivation of a

2. *The Salem Branch.*—After the establishment of the Highlands Carolina Nursery the proprietor of the Nursery found that it was desirable to maintain an establishment from which shipments of mature plants might be made on short notice. This was done by acquiring a tract of land in the historic town of Salem and equipping it with such an assortment as were most in demand by Eastern planters. Many of the rarer rhododendron hybrids are grown at Salem, which is now also the business headquarters of the Highlands Nursery.

IMPORTANT SPECIALTIES

Isn't it curious how often people willingly spend money in purchasing plants simply for the purpose of securing the unusual? The really important features of intrinsic beauty and innate value as measured by adaptability are frequently quite overlooked. This is the case with scores of worthy American plants. What discriminating plant grower, we

may ask, with an eye to grace and beauty exhibited throughout the year, rather than restricted to a period of a couple of weeks, would not prefer a fine clump of rhododendrons to an expensive Japanese maple, attractive though the latter may be in summer time when it has hundreds of worthy competitors; or who would not prefer a graceful, well grown Carolina hemlock to a ragged and unhappy Japanese cypress? It may be further stated that the sanest of the landscape architects are now using larger quantities of natives than was formerly the custom, and they are bringing fuller satisfaction. Good examples of plantings in which natives occupied a prominent place with excellent effect were to be seen at the Jamestown Exposition, Norfolk, and at the recent Alaska-Yukon Exposition at Seattle.

No small part of the change of front in regard to the use

keep American grown plants somewhat in the background. We recall a conversation with a foreman of a prominent English nursery who in displaying with pardonable pride a magnificent specimen of *Rhododendron catawbiense* asked if it was adapted to American conditions, or at all well known in our country! We were obliged to say that it was not nearly as well known as its merits deserved and this like a good many of our fine ornamentals were handicapped by being natives. The Highlands Nursery ships young or mature clumps, small or large, from either the Carolina headquarters or the Salem branch. The Nursery has developed a satisfactory system of handling these plants from the wildling stage, as found in the open, to the stage with strong, vigorous, transplantable roots and lusty, well branched tops. There is a wonderful difference between the value of these



Home of Harlan P. Kelsey, Salem, Mass.

A Promising Nurseryman in Foreground.

of natives is due to the advocacy of these plants and the demonstration of their value by the Highlands Nursery and also to the further important fact that when a supply was needed it was known where it could be secured. The stock of all important forms has been very largely increased to meet this demand and the "collecting of best strains of native seeds and plants has become a leading feature in the annual routine of Highlands Nursery work."

One of the prime specialties is the hardy, broad-leaved evergreens. More than a century ago John Bartram and his successor, Humphrey Marshall, the pioneer collectors of Pennsylvania, sent *Rhododendron catawbiense* to England and Europe. Its great beauty and general utility were promptly recognized, it became very popular and is now one of the prized American plants in Britain and has become one of the parents of a large number of hybrids, many of which have been sent back to this country. The ease with which exotics can be secured and the mistaken notion on the part of many that all rhododendrons and all plants secured from foreign countries were of foreign origin, has tended to

domesticated plants and the so-called "collected" clumps which are frequently used. The directions provided by the Highlands Nursery emphasize the point that if success is to be attained limey soil must be avoided, plenty of leaf mould, or humus bearing material must be given, and an abundant mulch must be provided. Where special shade is available it must be used to advantage, especially in winter time.

THE NATIVE AZALEAS

These are closely related to the broad-leaved evergreens and differ chiefly in character of flower and in the fact that the leaves are deciduous. They are of scarcely less importance than rhododendrons to American planters. The Highlands Nursery from its first establishment has been keenly interested in the propagation of this group of beautiful shrubs. The treatment of these is essentially the same as rhododendrons. They should, like the rhododendrons be massed for best effect. The frontispiece in this issue suggests as clearly as possible by the use of black and white, the exquisite delicacy of the flowers. These are the kinds



1. Sorting and counting *Lilium superbum* bulbs.
2. Herbaceous beds at Highlands Nursery.
3. The Linville river flows through Highlands Nursery.
4. Specimen Carolina Hemlock (*Tsuga caroliniana*).
5. Office of Highlands Nursery.

Views in the Highlands Nurseries.

grown by Harlan P. Kelsey, but in the section of deciduous shrubs there are of course scores of others of great beauty, such as represented by andromeda, white fringe, the various cornels, thorns in large variety, bush honeysuckles, leatherwood, Witch hazel, American holly, rhodora, the wonderful Allegheny and Carolina Roses, native spiræas, viburnums, and the like.

THE NATIVE CONIFERS

These are grown in large quantity by the Highlands Nursery. This is evidenced by the fact that 125,000 hemlocks composed the plantings of a single form of this beautiful conifer for the season of 1910. The conifers form a third great specialty, and prominent among these is the Carolina hemlock, as fine as anything we have among the great list of coniferous trees. It is of striking pyramidal form and remarkably graceful habit.

DECIDUOUS TREES

Special attention is paid to trees adapted for park, street and private lawn. These form another division in nursery work and are separately described in the attractively illustrated catalogue. In looking over the available material set forth in this collection one wonders why there is need of planting such dubious woods as cottonwood and soft maple. Think of the wealth of splendid material we have in pin oak, chestnut oak, the picturesque gums, the hardy hackberries, vigorous elms and impressive maples. Some day American planters will get over the habit already badly fixed of trying to do things in a hurry.



Harlan P. Kelsey, in 1910.

We have only space to mention the Nursery section devoted to ground creepers, so much in demand for shady places; the division occupied by hardy climbers and twiners necessary to drape the unattractive and screen objectionable features; the native ferns for cool and moist conditions, and what a wealth of these we have! the bog and water plants, including pitchers, the interesting Venus fly traps and their



Rhododendron catawbiense. The Highlands Nursery way of growing bushy clumps. 15 to 50 stems. Photographed at the Salem Branch Nursery.

allies. Not less attractive are the terrestrial or non-parasitic orchids, of which the lovely lady slippers are prominent representatives.

BULBOUS PLANTS

The native lilies contribute generously to the floral culture of the Alleghenies. To know that queen among lilies, *L. Superbum*, Turk's cap lily, is to recognize one of the handsomest members of the whole group, verily a queen in a truly royal family. Highlands Nursery is headquarters for this form. Don't forget the wake robins, bleeding heart, Jack-in-the-pulpit, and many other old time favorites. These are necessary in lawn planting in order to flavor the home with appropriate reminders of the childhood period.

PERENNIALS

We have not spoken of the herbaceous plant section. Indeed, we can merely mention the fact that more than 150 beautiful species are cultivated in this area, most of them very attractive, all of them hardy and serviceable.

The Highlands Nursery is the center of a region of surpassing interest to the plant lover. The proprietor welcomes visitors with the feeling that an acquaintance with the wealth and qualities of the native flora will be as good for the tourist as the plant grower. The proprietor of the Highlands Nursery is happy in the possession of a definite and worthy mission. This mission is to extend a knowledge of and widen the interest in the growing of good American plants, which after all are the best for American conditions.

The National Nurseryman

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The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States, Canada and Europe.

Official Journal of American Association of Nurserymen.

AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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Six months,75
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Six months,	1.00

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ROCHESTER, N. Y., FEBRUARY, 1910.

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Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

A SPRAY TRUST

There are apparently all kinds of trusts, either formed, or in the making. One of the latest we hear of is a spray trust, and the plaint comes from the Pacific Coast fruit growers that, owing to a combination of the county inspectors, the fruit growers are virtually in the hands of a spray trust. Such a plaint would raise a pretty well defined suspicion that the growers were not keen on spraying. They claim that the inspectors force upon them a spray which they themselves compound, the formula of which is known only to them. This difficulty seems to have arisen in the Los Angeles region.

PRUNING

The December issue of *Better Fruit*, our attractive contemporary from the Pacific Coast, contains some excellent articles on pruning and orchard management. The articles on pruning illustrate the differences in point of view on this essential and fundamental practice held by Western fruit growers as compared to that held and to some extent practiced by Eastern fruit growers. One notes that the same problems that have been pressing in the East here for a good many years are beginning to manifest themselves in the West. Prominent among these is the problem of thinning the orchard. The trees in the West are approaching their mature size and as a consequence are beginning to crowd. This is exactly the condition which prevails in hundreds of orchards in New York and in New England. Many men are so shortsighted as to attempt to make each individual tree smaller by pruning rather than cut out the tree entire.

This number shows also some excellent systems of double planting and methods of establishing orchards after the present-day intensive methods.

Does the public give the introducer of worthy varieties sufficient or even reasonable credit? Are we not prone to think he is making shoals of money, and therefore credit him with purely selfish aims?

As a matter of fact the introducer rarely makes money and the originator of new fruits almost never. When we consider the gifts which they give to man in such varieties, as for example, Concord and Delaware grapes, Baldwin and Spitzenberg apples, Crawford and Elberta peaches, Bartlett and Anjou pears, we are disposed, or should be disposed to place the introducer somewhat nearer the standing of the real philanthropist. This is as it should be, but as a matter of fact the dear public is more often inclined to "knock."

True, there is a time to knock, and this is when worthless wonderberries and prehistoric spineless cacti are handed out to a public not satisfied with reasonable creations but desiring the magic and remarkable. On the other hand, the drawing of an occasional blank like these should not discourage but should rather incite a desire to investigate.

The great question at this stage of horticultural progress is to find the variety better suited than all others to each fruit growing section. To the men who are studying these problems let us offer frequently criticism, but let us continually temper this criticism with generous encouragement.

CLIMATIC VAGARIES IN THE WEST

By concurrent dispatches early in January the public was informed of great damage by flood in the vicinity of Los Angeles where, according to the veracious newspaper writer, for thirty-six hours "the most disastrous storm of two decades swept Southern California, four and a quarter inches of rain falling during that time in many places. Hundreds of acres of farm and other land was under water." "It is estimated that fifty per cent of the celery crop was ruined. Citrus fruits probably were not damaged to any great extent." "Following the storm there was a freeze in the citrus fruit belt and considerable damage was added to that caused by the flood itself."

Accompanying dispatches announce that "the temperature over the entire orange belt for three nights ranged from 18 to 24 degrees." It would appear that the trees as well as the fruit were severely injured on low land and considerably injured on high ground. The New York Packer is authority for saying that the injury is the most serious which has come to the citrus interests of the Pacific Coast in a generation.

IN THE SOUTH

The injury in Florida to the citrus industry does not seem to be serious. The cold wave of the early days in January spread itself pretty well over the state and while the reports indicate the general injury to the tenderer of vegetables, no serious injury to orange groves is reported. The lettuce crop was practically knocked out in most regions, while celery was injured to some extent.

The effect of this freeze in California will probably result in advanced prices for oranges, while the injury to the vegetable crop in Florida will increase prices of fresh vegetables during mid-winter.

FOREST TREES UNDER CULTIVATION

The question is often asked, how long will it take a deciduous or coniferous tree to reach merchantable size under cultivated conditions? Results which have been secured at the Central Experiment Farm, Ottawa, Canada, emphasize the fact that soil is an important factor in the growing of certain species. A considerable acreage of trees covering a variety of soil was set out in 1888 and '89 at this place. The most striking effects of soil on the character and rapidity of growth were noted. In the case of Black Walnut about which there are many inquiries, it is shown that on low, sandy soil, trees planted in 1889 have attained an average height of only 10 ft., with a 2 inch diameter of stem four feet from the ground. The same species on a sandy loam in which a considerable percentage of small stones are found, and which presumably is a much richer soil, has attained an average height of 21 ft., with a diameter of stem of 3½ inches. On clay loam the average height in these twenty years of growth is 15 ft., and the average diameter of stem the same. It should be noted, however, that in the case of the Black Walnuts making only an average height of 10 ft., they were planted 10 by 10 ft. apart, whereas those attaining an average height of 21 ft. were planted 5 by 5 ft. This would not encourage a more

upright growth, but the fact that their stem diameter is nearly twice as great as the trees on low, sandy loam, indicates that the soil was the principal governing factor.

SCOTCH PINE

In the case of this species, which has been planted on quite a variety of soils shading from light, sandy loam to clay loam, there is no such striking difference as with the Black Walnut. The trees which have made greatest growth are those planted on light, sandy loam 10 by 5 feet apart. They have now attained an average height of 34 ft. 10 in., with a diameter of trunk of 8½ in. Trees planted on gravelly loam 5 by 5 ft. have attained an average height of 30 ft. 4 in., but are very slender, inasmuch as the average diameter of stem is only 3½ in.

LEGISLATION

ALBANY, N. Y., January 6, 1910.

TO WHOM IT MAY CONCERN:

To prevent the introduction or establishment in the State of New York of certain destructive insect pests and fungous diseases that now seem likely to be shipped here from abroad or from other states, I invite the attention and hearty cooperation of Custom House Brokers, Importers, Nurserymen and Planters to the following portion of Section 305 of the Agricultural Law:

All transportation companies, custom house brokers or other persons importing or bringing nursery stock into this state, shall immediately, upon receiving such consignment, notify the commissioner of agriculture of the fact that such consignment is in their possession or is en route to some point within the state and give the name of the consignor and consignee, and the points of shipment and of destination of such consignment, and the name of the transportation company bringing such stock and the route or routes over which it is brought and shall make such further report relative to such shipments as the commissioner of agriculture may from time to time require. Any person bringing nursery stock into this state or receiving nursery stock from outside the state shall before unpacking the same within the state apply to and receive from the commissioner of agriculture a permit so to do; the commissioner of agriculture shall upon being satisfied that said stock so desired to be inspected is free from any dangerously injurious insect pest or disease issue a certificate permitting such person to unpack such nursery stock. No person shall knowingly or wilfully bring into this state or unpack within the state gipsy or brown-tail moth or other insect pests or caterpillar, larvæ, pupæ or eggs of the same except for scientific purposes and then only upon the written consent and approval of the commissioner of agriculture.

All shipments will be inspected at points of destination. For this purpose information must be sent to this office promptly to avoid delay.

Failure to comply with notice or order of the Commissioner of Agriculture constitutes a violation of the Agricultural Law, which must be enforced.

GEORGE G. ATWOOD,

Chief, Bureau of Horticulture.

By order of R. A. PEARSON,

Commissioner of Agriculture.

EDITORIAL WANDERINGS

Vancouver Island and its English Capital.

These lines are written as the train sweeps around the undulating shore line of Shushwap Lake near Sicamous Junction where the traveler for the Okanagon region of British Columbia transfers to a branch line. The last letter of this series was written in the early days of August as the writer was heading westward through the scene of late mining excitement in North Western Ontario. The intervening period has carried him across the great plains between Winnipeg and the Rocky Mountains, through the interesting Crows nest pass, the lowest in the Rockies, among the fruit growers of the Kootenay, the Thompson and the Fraser River regions, in addition to a flying trip through the Puyallup and Hood River Valleys of Oregon and the Island of Vancouver, on the western boundary of British Columbia.

VICTORIA AND SURROUNDINGS

The traveller from the East reaches Victoria by taking steamer at the C. P. Railway terminus at Vancouver. An attractive cruise of five hours through the Archipelago, past many beautiful islands all clothed with the characteristic woods of the Pacific coast brings him to Victoria, the capital of the Province. In the early days Victoria and New Westminster were the important towns of the north coast but they have both been obliged to acknowledge the commercial supremacy of Vancouver which, backed by the powerful Canadian Pacific and Hudson Bay Company interests, has grown with great rapidity in recent years. In fact, the growth of Vancouver, now a city approaching the 100,000 mark, founded in 1886, is one of the most striking examples of phenomenal development on the whole Pacific Coast region.

But it is of Victoria and vicinity that we would speak at present. It is essentially an English city having at the present time a population of about 40,000. The two striking features which attract the eye of the incoming traveler are the magnificent pile, including government and parliament buildings and the handsome Empress Hotel owned and operated by the C. P. R. The Parliament buildings,

architecturally, are among the finest legislative structures in America and are a great credit to the Province. The Hotel is also an example of a luxurious and well managed hostelry.

Victoria is an English City. Its people are largely English or Canadian, and much of the business is conducted after English methods. Its clubs are English in management and membership. The union club is one of the most noted institutions of its kind in the West.

THE ENVIRONS

There are few cities on the continent that can show such a pleasant and easy gradation from city to country. Many of the city people own attractive farms or summer homes in the suburbs. There is no sudden transition from city to country conditions.

In the immediate vicinity are handsome country houses and well kept farms and fruit lands. Nowhere have we admired the architecture of country homes more than in the suburbs of



A British Columbia Orchard in the non-irrigated Section.

this western city.

Fruit growing is an important branch. The city and local markets, on account of the large tourist travel are excellent for early fruits and summer vegetables. The rainfall is comparatively heavy for the twelve months but rather light during summer, so that intensive tillage must be practiced. We saw productive Olivet and May Duke cherry orchards and fine strawberry fields, the latter frequently used as secondary crops in the apple orchard. This country is happy in the fact that it has thus far been able to keep out codling moth. One or two small infestations have occurred but the drastic measures adopted by the Department of Agriculture have been thoroughly successful in controlling it.

While the annual rainfall in the vicinity of Victoria amounts to forty or more inches, the precipitation is often very light during the summer, months so that thorough, clean cultivation is not only desirable but absolutely essential to success.

The Eighth Annual Meeting of the American Association of Official Horticultural Inspectors

GEORGE G. ATWOOD, N. Y. STATE DEPT. OF AGRICULTURE.

The Eighth Annual Meeting of the American Association of Official Horticultural Inspectors was held in Boston, December 27-29 last.

The association is composed of persons having charge of the inspection of nurseries and orchards in the various states and Canada. The membership is potent in its influence over the regulations and even the laws governing horticultural inspection in this country. A committee was appointed to draft a constitution and by-laws to perfect a permanent organization to be approved at the next annual meeting in Milwaukee, Wis.

The President's address contained "an appeal to the members of the Association to stand together as a unit in endeavoring to perfect inspection laws and other conditions of inspection which tend to promote the best interests of good horticulture in the United States."

INSPECTION OF IMPORT STOCK

He further said that "An impetus to our work has arisen in the danger contained in imported stock and the additional work put upon the inspectors in the various states on this account is no mean factor. The indifference of florists and nurserymen in connection with this necessary inspection of foreign stock is to be deplored. While I believe we, as inspectors are not all unanimous in desiring uniform inspection laws throughout the country, nevertheless, if it were possible to have federal laws supporting this body in its resolutions, and its members in the various states, I believe it would add dignity to the work, and relieve us of much embarrassment."

The legislative committee of the Eastern Nurserymen's Association was at the Boston meeting to discuss certain provisions of a federal inspection bill recently introduced in Congress. (See Mr. Pitkin's report in *National Nurseryman*, January). This bill provides for United States inspection of all imported nursery stock at ports of entry to prevent further introduction into this country of all destructive insect pests. A measure of this character receives the unanimous support of all parties interested. The nurserymen object, however, to the clause of the bill providing for inspection at the port of entry. Their argument that to wholly unpack at the wharves and thoroughly inspect nursery seedlings would be expensive, injurious to the stock and impracticable, was concurred in by the inspectors who passed a resolution, favoring a plan providing for inspection at ports of entry, of all small shipments from foreign countries and the inspection of large shipments at points of destination where the work can be done more carefully without damage to the stock in the cellars of the consignees.

One high authority actually favors absolutely prohibiting the importation of seedlings from abroad, claiming that the

situation demands strenuous measures if we are to keep certain destructive insects from becoming established in this country and that the nurserymen can and should grow their own seedlings. While the nurserymen do not under-rate the importance of the former claims, few can agree that seedlings and stocks can be grown in this country of as good quality or at as low a price as those usually imported.

DEMONSTRATION ORCHARDS

Inspectors in many of the states are charged with the duty of caring for demonstration orchards where the whole subject of the proper care of orchards from planting to the harvesting of the fruit are practically shown. This is done at the expense of the state in Maryland, Ohio and Pennsylvania, on farms owned by the state and in each county. This line of work is proving very useful and popular.

BROWN TAIL MOTH

An inspector of the State Department of Agriculture of New York gave a detailed statement of the work involved in the inspections for brown tail moth in importations of stocks from France in the spring of 1909. About 5000 boxes were carefully inspected and over 7000 nests containing live caterpillars were found in 745 boxes. As a result of the most thorough inspection and the methods employed it is believed that none of the pests have become established in the state. Subsequent inspections of all stocks planted in the state have not revealed a single infestation. Brown tails were first found in nursery stock from France in January, 1909. On the discovery of this fact all the members of the Association were notified by the Department and subsequent notifications of shipments to many states and Canada were sent thus calling attention of the inspectors to the necessity of prompt action. Thirty-eight different State inspectors were thus notified of 529 shipments embracing some 7000 boxes and packages. In many of the shipments the insects were found and reported so the New York inspectors have primarily prevented the establishment of this serious pest in New York and in many other states as well where it is yet unknown.

The programme for discussion was too long to be fully covered though several prolonged sessions were held. The coherence and the usefulness of the Association has again been shown and a full report of its proceedings will be published in the *Journal of Economic Entomology*.

The courteous President, Prof. F. L. Washburn of Minnesota, and the hustling secretary, Dr. T. B. Symons of Maryland were re-elected.

The able editor of the *NATIONAL NURSERYMAN* was unable to be present and asked me for my notes on the meeting, as no notes were made I am pleased to submit my recollections.

"COMMERCIAL ORCHARDING"—A SHOT AT THE PROFESSOR

CHAS. C. BELL

There is always room for improvements and lessons to learn—while young we often do not like to admit this, but as year after year we battle the existing conditions we realize it to be true. From the past thirty-three years' experience as a fruit buyer and packer as well as a grower, I would say that the success of commercial orcharding depends after all "like everything else in life" on the proper management and thorough understanding of existing conditions.

It is all-important to know that location and soil are right; and that you plant the right commercial varieties. I advise you to sell the crop as soon as you get a reasonably fair offer; never hold for speculation, unless you are in position as a dealer to know from past experience just what you may reasonably expect. Remember always that "fruit is perishable." It matters not how fine and perfect your fruit is, it is only a question of weeks or months when if not consumed it will decay. Hence I am in favor of selling just as soon as possible, and I never envy the profit a dealer makes, knowing the risk he has to assume. But above all else, whether you are a dealer or a grower, "Pack your fruit honestly"; always remember that you cannot take better fruit out of a package than you put in. Knowing that fruit by its natural and unavoidable decay will more or less continually depreciate, whether in or out of cold storage, it is evident that no package of fruit will open up as sound and perfect as the day it was packed, hence an important part is proper assorting and careful packing. If you have "First Class" fruits, pack and mark it as such, if you are in doubt, give it the benefit of your doubt and pack them as "Seconds," but if you think they are not good Seconds, then do not pack them at all, but work them up into cider, vinegar, jelly, dried fruit, etc.—the trade will soon find out your packing, and if it is honestly done they will call for it. It is the poor fruit and dishonest packing that gluts our markets, depreciates prices and diminishes demands. With the present Pure Food Law it is now possible to work up to good advantage at home all fruit which is below a good "second" and you will save much less in packages, freight and commissions.

I have said that it is all important to plant the right commercial varieties, and in this we often have been disappointed and deceived by the nurserymen. But at this time when we have so many good and responsible men in the nursery business, we can be reasonably sure of obtaining healthy and true-to-name fruit trees. We should also be greatly benefited by our State Horticultural Experimental Stations, with its staff of professors, (which are mentioned at considerable expense by the taxpayers), provided those horticultural professors and investigators do not give you information which they themselves only understand as theory. In other words, I want to say to those professors "to be sure you are right, before you tell the Orchardist and Nurseryman what to do." I know there has been much harm done to nurserymen in many cases of incompetent and unfair inspection. I call to mind an incident which took place at the State Horticultural Winter meeting at Farmington in December,

1900. I took to said meeting several two year old apple trees which had some root knot, about which I wanted information. I was surprised that most of the experts advised me not to plant those trees, and one of them took the position to tell me that while there was no law to compel me to pull up and burn all those trees forthwith, there ought to be such a law, because these Root-Knots were capable under favorable conditions of the weather, to send out millions of spores and thereby infect everything. I was willing to listen to reason, but this contention simply appeared to me silly, "Education goes to seed." My reply was, that with all due respect to the learned Professor, "In as much as these trees are my trees, grown in my private nursery, and for my own use and planting, and for the further fact that from all appearance they were thrifty and healthy trees; I would plant them—"and I did," and today these trees which were condemned by the learned Professor at the Farmington meeting occupy about twenty acres in our orchard, and are a beauty to behold. They are healthy and strong and ready to bear fruit. I cite this incident to show how injurious it is to give wrong advice, and lead some to believe that nurseries have at times been unjustly handicapped and injured by incompetent inspection. As a fruit grower and tax-payer I am interested in getting Facts—"Not Theories" hence I advise the Professors and Investigators of our state experimental stations to adopt "David Crockett's Motto" "Be sure you are right and then go ahead"—Theories are very unreliable, we want plain, common sense facts.

As to Commercial Orcharding, while many (perhaps most of the large orchards) have not proven as profitable as anticipated—may in part be due to the fact that "too much was expected" but the chief reason will be found in a failure to select the proper location, soil and varieties. However, I will add that my observations have convinced me that the small and medium sized orchards have averaged, and always will average better returns per acre, than the large orchards promoted by some Company. I therefore, recommend the planting of medium size and family orchards, but be sure you have the right location, soil and varieties.

HERE AND THERE

Peter Schott of Knittelsheim (Rheinpfalz), Germany has issued a price list of Forest Seeds and Forest Trees. It will be furnished on request.

Herman Langer, Eatonstown, N. J., writes: "Last week I received Webster's New Illustrated Dictionary. I find it a very handy book in every way."

Ernest F. Coe, President of The Elm City Nursery Co., sailed January 22d on the White Star Line Steamer Baltic. He will visit the important European nursery centers.

THE NATIONAL NURSERYMAN received a card of New Year's Greeting from Conrad Appel, Darmstadt, Germany.

THE NATIONAL NURSERYMAN begs to acknowledge its thanks for the receipt of New Years Greetings and Calendars from the following: J. H. Skinner & Co., Topeka, Kans.; W. Van Kleef & Sons, Boskoop, Holland; H. S. Wiley & Son, Cayuga, N. Y.; Thomas B. Meehan & Sons, Dresher, Pa.; the Benjamin Chase Co., Derry Village, N. H.; the DeLaval Separator Co.

CONDITIONS IN CALIFORNIA

Dear Sir:

It is quite evident from your letter that the unfavorable weather conditions in California have been very much exaggerated, for the simple reason that as far as I know, no damage has resulted to fruit trees of any kind in any section of the State. The citrus trees in the San Joaquin Valley have not been injured, and as to the fruit of these trees, practically all of this was shipped before the cold spell, which was not particularly severe, for at no time did the thermometer go below 25° above zero, Fahrenheit.

I have been trying to learn from Mr. Wood, who is interested with me in the Røeding & Wood Citrus Nursery at Exeter, and who is now in Los Angeles, how serious the damage is to the citrus trees in that part of the State. I have delayed answering your letter, fully expecting him to return to Exeter, which is about fifty miles from Fresno, to find out how serious the damage has been south, but at this writing he has not returned from his trip, so, I have not been in the position to secure the information. All the information I have on the subject, as to the damage in the southern part of the State is from the newspapers, and they report that the citrus crop has been damaged to the extent of about a million dollars. Citrus nurseries in unfavorable locations have probably been damaged, but to what extent I am not in position to say. This much I do know, however, and that is that outside of citrus trees, no damage has been done to fruit trees in any amount. As far as the citrus orchards themselves are concerned, the temperature would have to go as low as 20°F., to injure the trees, and even at this temperature, they would come out during the spring again, with every possibility of producing a good crop the following season.

Should you desire any further information, I will be very much pleased to give it to you.

GEO. C. ROEDING,
President and Manager.

BUSINESS METHODS APPLIED TO FRUIT GROWING

Mr. J. W. Stewart, Proprietor of the Protumna Orchards of West Virginia, announces an interesting experience which he has had in securing apple pickers and packers and managing his orchard force during the past season. He secured his pickers by advertising in the country stores in the surrounding counties and by announcing the fact through public sources that the country in which he was located would have a large fruit crop. This method secured a goodly force from which to select his picking contingent. He arranged sleeping and boarding quarters for his gang and organized them into four groups of fifteen men each, with a sub foreman at the head of each group. The cost of boarding these men varied from 50 to 60c per day. The cost of picking the apples added to the cost of the package was practically 55c per bbl.

This general plan of managing the apple harvest seemed to work very well, and the owners of orchards who cooperated this year have the promise of abundant labor next season. It is another argument in favor of the cooperative method.

ANNUAL MEETING OF WOLVERINE NURSERY COMPANY

The annual meeting of the Wolverine Co-operative Nursery Co. Ltd. was held at Paw-Paw, Mich., Monday, January 10, at 1:30 p. m. Many items of common interest were discussed. This company spent about \$125 in experimental work with chemical fertilizers last season and this season voted to use \$100 for the work. It is being tried to determine the proper time and amounts to use on different soils and on different crops; also the best ratios for compounding. The work the past season showed good results.

BERLIN, Md.—D. W. Babcock, who is a life-long nurseryman, graduating from the nurseries of Western New York, and foreman for J. G. Harrison & Sons of Berlin for the past ten years, has leased the Dr. Hammond property on South Main Street for a term of years and will plant it to nursery and florist stock, making a specialty of forest and fruit trees and shrub seedlings, florists' bulbs, roses and bedding plants.—*Florists Exchange.*

HOLLANDIA NURSERY CO.

Two prominent Hollanders, Geo. C. Groenewegen and H. DeSchepper, have settled themselves as florists and nurserymen in the town of Decatur, Benton county, Arkansas. Shipping facilities are good from that point and such cities as Kansas City, Mo., St. Louis, Mo., etc., can be easily reached. Both have been in the business for years and have had a practical education in different countries of Europe. They have plenty of the finest land at their disposition and are anxious to communicate with first class growers in their vicinity. The name of the new concern is the Hollandia Nursery Company, located at Decatur, Ark.

A CORRECTION.

We desire to correct a statement that appeared on page 433 of the January number of this journal. It is there stated that F. W. Kelsey, having severed his connection with the American Nursery Co., will continue in business under the name of F. W. Kelsey Nursery Co. and that this company will own and conduct the business established by F. W. Kelsey in 1875. The words: "The new firm which is really an old firm under a new name....." also appeared in the notice.

After careful examination of official records of the transaction, it develops that, by the terms of purchase recently made, F. W. Kelsey surrendered to the American Nursery Co. all the property, rights, good will, and all that belonged to the business established by him in 1875. He was allowed, however, to start in a new business, having surrendered for a consideration all rights to the old business.

In justice to the party affected by the notice of last month, we make this explanation.

EASTERN ASSOCIATION OF RETAIL NURSERYMEN

This organization met in Rochester, January 27th, for the transaction of routine business and the election of officers. The same officers were reelected. No important business was transacted, although the members listened with interest to suggestions presented by Commissioner of Agriculture, Pearson of New York, for the control of brown tail moth on imported nursery stock.

Doings of Societies

OHIO NURSERYMEN MEET

The third annual meeting of the Ohio Nurserymen's Association was held at Hotel Vendome, Columbus, O., on Jan. 11th, 1910. It proved to be the best meeting of the Association in point of numbers and interest, about thirty of the leading nurserymen of the state being present.

The address of the president, J. W. McNary, was a very thoughtful and candid review of the entomological conditions effecting the nurserymen and of the work of the executive committee for the past year.

The "Small Fruit Trade in Ohio" was the title of a very able paper prepared and read by W. N. Scarff. He took up the history of the small fruit plant trade in Ohio for the past twenty years, describing the evolution of the trade from the time every farmer attempted to grow his own plants and some to sell, up to the more satisfactory and up to date methods of the small fruit plant nurseryman who makes a specialty of the work and not a side issue. He also referred to the approved methods of growing, storing and packing of nursery products. All these changes have been in the interest of the buyer so that now few small fruit growers attempt to grow their own plants, relying almost entirely on the nursery for their stock.

Mr. Fred Green of the L. Green & Son Co., prepared a paper giving much valuable information on winter storage of nursery stock, comparing results with the different methods. Special attention should be given to watering, ventilating and the use of proper packing material. Every nurseryman must learn by experience how best to handle conditions in his own cellar.

The meeting was attended by the state inspection force. Chief inspector, N. E. Shaw, gave results of extensive experiments during the last year for the control of wooly aphids on apple trees in the nursery.

The question "Should Nurserymen be Allowed to Profit by the Fumigation Treatment" was followed by a warm discussion of inspection methods. No definite action was taken by the Association, asking for a change in present methods, although the general sentiment prevailed that some change ought to be considered at an early date.

A social session was held in the evening at which J. H. Dayton gave a very interesting talk on his recent trip to the "Great Northwest." S. W. Call gave several recitations and all dispersed at a reasonable hour after giving the entertainers a hearty vote of thanks.

The officers for the ensuing year are as follows: President, J. W. McNary, Dayton, O.; secretary, W. B. Cole, Painesville, O.; treasurer, W. N. Scarff, New Carlisle, O.

AMERICAN ASSOCIATION OF REFRIGERATION

This organization which is affiliated with the International Association of Refrigeration with headquarters in Paris, France, announces the program for the coming convention to be held in Vienna, Austria, September 29 to October 3, 1910. Among the chairmen of committees are Albert N. Read, Security Storage Company, Washington,

D. C.; G. Howard Powell, Bureau of Plant Industry, U. S. Department of Agriculture; Gardner T. Voorhees, consulting refrigerating engineer and author, New York. Secretary of the Association is Mr. J. F. Nickerson, 315 Dearborn St., Chicago.

TEXAS NURSERYMEN'S ASSOCIATION

The following program was rendered at our mid-winter meeting in Dallas, Texas, on Jan. 14th, and proved to be one of the best winter meetings the Association has yet held. The prominent feature of this meeting was the discussion of the policy of replacing nursery stock, said policy having been a general practice by Texas nurserymen during past years. A resolution was adopted condemning the practice as "unwise, unbusiness-like, and wholly unnecessary," eighty per cent of those present favoring the resolution. The adoption of this resolution means a return to sane methods, and will prove beneficial to both nurseryman and planter. To Stark Bros. Nurseries & Orchards Co., Louisiana, Mo., the Texas Nurserymen wish to extend their thanks for two boxes of splendid apples.

Mr. E. P. Bernardin of Parsons, Kans., was guest of the Association and, as usual, lent his enthusiasm and eloquence to the occasion. The probabilities are that Texas will be well represented at the National Association next spring.

J. R. MAYHEW, *President*.

PROGRAM

Reviewing the Year, 1909; What Have We Accomplished?—J. R. Mayhew, Waxahachie, Tex.

Looking Forward; What Are Our Prospects for 1910?—J. B. Baker, Fort Worth, Tex.

Is the Nurseryman Making the Progress, Financially, That Are Other Business Interests in Texas?—E. W. Kirkpatrick, McKinney.

How Does the Supply in General Line of Stock for 1910 Compare With Former Years?—F. T. Ramsey, Austin, Tex.

How Can We Make Better Collection in the Retail Business, Especially on Deferred Payments?—H. E. Hall, Sherman, Tex.; W. J. Schulze, Bangs, Tex.; J. W. Tucker, Waxahachie, Tex.

Prominent Features of the Western Association, Kansas City, Dec. 21-22.—C. C. Mayhew, Sherman, Tex.; W. P. Stark, Louisiana Mo., Vice-Pres. National Association.

Is it Policy to Replace on Retail Orders Trees Which Have Died in One, Two, or More Years After Delivery?—E. W. Knox, San Antonio, Tex.; A. K. Clingman, Keithville, La.; Jno. S. Kerr, Sherman, Tex.

The Season in Alabama.—Henry B. Chase, Huntsville, Ala.; Ex-President Southern Association.

ALABAMA STATE HORTICULTURAL SOCIETY

The seventh annual session of this active Society now working under the presidency of W. F. Heikes of the Huntsville Nurseries, Ala., met in Bessemer on January 28th, and 29th. This town is located near the manufacturing center of Birmingham. The session was an exceedingly interesting one, the principal features emphasized being those which were of special interest to Alabama. In this connection, Mr. Walter Swingle of Washington, D. C., spoke on citrus fruits adapted to Alabama, while Dr. J. F. Wilson, secretary of the National Nut Association, spoke on varieties of pecans adapted to that state. Among other subjects treated were injurious insects, forestry and landscape gardening.

Business Movements

C. R. Burr, Manchester, Conn., spent several days visiting the nurserymen of Rochester, making his headquarters at the Seneca Hotel. He left on the morning of the twentieth for Geneva, going from there to Painesville, Chicago and intermediate points.

"Business is good. The cold weater has handicapped us a little, but the orders just will come. We will do the best spring business ever, and will about double our plantings this spring besides the adding item.

Jan 16th, 1910.

VALDESIAN NURSERIES.

FROM ROCHESTER TO RUSSIA

It is interesting to note that the Russian government is looking up the horticultural products of the United States. Recently Messrs. Ellwanger & Barry of Rochester, received a request from the Russian Government Agricultural Commissioner in this country for copies of their catalogue to be sent to the Minister of Agriculture of the Czar's Domain. In this connection we recall the fact that Messrs. Ellwanger & Barry were the importers of the first consignment of Russian apples which were brought to this country over a third of a century ago. The testing of these apples was a large task but out of them came some valuable varieties for the Northwest particularly, and a few for the country generally.

HARRISON'S NURSERIES, BERLIN, MD.

The Harrisons have made a special effort in the preparation of their catalogue this year to build one up which would not only be instructive but attractive. The covers of this catalogue present four full page colored lithographs of cherry, strawberry, apple and peach, and strawberry in cases, respectively.

The body of the catalogue is made up of carefully presented authentic information on the planting and cultivation of fruits large and small, and ornamentals, both trees and shrubs. It is illustrated with the usual good McFarland half tones. The catalogue as a whole represents a forward type of this kind of selling agent employed by most progressive nurserymen.

WESTERN FRUIT JOBBERS' ASSOCIATION AND APPLE PACKING LAW

At the meeting of the above Association in Denver on January 7th, a very lively discussion occurred between the growers of the East and those of the West in reference to the Lafean apple packing bill. The men of the East unitedly supported the bill while the Pacific Coast representatives stood solidly for a bill which would recognize the box package now in use on the West Coast. With such diversity of view on the question of the box package it does not seem likely that any progress will be made at the present session of Congress in securing uniformity in box packages.

I believe our subscription to THE NATIONAL NURSERYMAN expires soon, and I enclose you \$1.00 for another year. You certainly have a good paper and we wish you success.

Yours,

W. T. MITCHELL & SON.

NEW YORK FLORIST CLUB

At the last meeting of this club Mr. A. L. Miller of Brooklyn, N. Y., was elected president. Mr. Miller is a florist of note with green house establishment at Jamaica, L. I., and business headquarters in Brooklyn. John Young was elected to succeed himself. The trustees of the club are H. A. Bunyard, F. R. Pierson and Phil F. Kessler.

WASHINGTON STATE HORTICULTURISTS

From the outline just received of the Sixth Annual Meeting of the Washington State Horticultural Association to be held at Wenatchee on January 12-14, the program bids fair to be of surpassing excellence and interest. The meeting of this Association, which stands in the front rank of the Horticultural Associations of the United States, will be one of import to the country at large.

NEW JERSEY FRUIT GROWERS

The New Jersey State Horticultural Society met for its thirty-fifth annual gathering in the State House at Trenton for a three day session—December 21, 22 and 23. The reports submitted included those of the fruit, flower, vegetable, special fruit and flower, and legislative committees. The discussions and papers presented were most helpful and suggestive, as was also the well appointed exhibit of fruit and flowers.

NEW YORK STATE AGRICULTURAL SOCIETY

A very important meeting of this, the oldest of the agricultural associations of New York State or in fact the Eastern States, was held in Albany, January 18 to 20. At this meeting some of the most prominent agriculturists and agricultural educators of the country were present and contributed to the addresses and discussions. Important addresses were given by President Schurman of Cornell, Dean Davenport of the Illinois Agricultural College, Dean Bailey of the New York State College of Agriculture, and several lesser lights in the educational world.

A committee was appointed for the purpose of reporting a scheme by which the agencies promoting agricultural progress in the state could be properly coordinated.

NURSERYMEN AT ROCHESTER

The meeting of the Western New York Horticultural Society at Rochester, January 26th and 27th, with from one thousand to twelve hundred fruit growers in attendance, was the occasion for the gathering of a considerable number of nurserymen at that place. Among these were: J. H. Dayton, Storrs & Harrison, Co., Painesville, O.; George S. Josselyn, Fredonia, N. Y.; F. H. Hartman, Dansville; Orville G. Chase, Geneva; Nelson Bogue, Batavia; W. L. McKay, Geneva; Frank Rupert, Seneca, N. Y., and many others. Aside from a not too religious attendance on the sessions of the Society a few semi-social functions were indulged in by the visiting brethren under the careful chaperonage of Papa Josselyn, assisted by Messrs. C. J. Brown and William Pitkin of the home city.

I inclose one dollar to pay for THE NATIONAL NURSERYMAN another year. I think it occupies a high place by itself.

Wishing you success,

JAMES M. COLGAN.

Correspondence

GREAT FIELD OF THE FRUIT JOBBERS

EDITOR OF THE NATIONAL NURSERYMAN,

The remarks you refer to as having been made by me at the Western Fruit Jobbers' Association Convention were made in responding to the Address of Welcome from the Governor and the Mayor, and of necessity were entirely extemporaneous, so that I am without notes, and presume that I know as little of what I said as anyone.

My reference to the magnitude of the business in which the jobbers are engaged was not based upon actual figures now available, but this reference covered the entire line in which the Jobbers of the Association are interested, that is Fruits, Vegetables, the Product of the Dairy, and Poultry.

Two years ago in December the papers published figures as issued by the Department of Agriculture. In this set of figures they named the total production of wealth for the year 1907 as \$7,250,000,000.00. Of this they approximated produce at \$2,500,000,000.00. I have tried to keep track of these figures since, but the Department refers me to so many different compilations that I have been unable to get hold of all of them, but with my knowledge of values and production and with a total figure given by the department for wealth produce this year, as being approximately \$8,250,000,000.00, I stated that the portion of that represented by the lines in which we were interested would be approximately just under \$3,000,000,000.00. Naturally I have used the license permitted a speaker under all conditions and circumstances.

I further called attention to the fact that no one realized the magnitude of the business or gave it the prominence that it deserved, emphasizing this with the illustration that even with what we term a light crop of apples, the total of last year only exceeding by a little over one-third the crop of 15 years ago, the commercial crop reduced to carloads would this year approximate 150,000 carloads. It is an easy matter to get me started on the dignity of my business.

We are the coiners into money of these products and are the only element that does this coining quickly, turning the actual money back into trade channels, enabling the producer to meet his obligations with his country merchant, the country merchant in turn meeting his, with the wholesaler and the factory. I claim for the trade first place in the commercial world, while the commercial world itself fails to recognize its importance.

I claim that we pay more to the transportation companies than any other line of business in existence, this because of the enormous magnitude of the products handled and high rates of freight they carry.

You see, even you have gotten me started. I believe though that this is a fruitful subject for investigation for such publications as your own, and that if those engaged in the industry could be brought to a full realization of the importance of their occupation, every man's chest would increase in measurement and a corresponding improvement in the general tone and ethics of the calling would follow.

WM. L. WAGNER.

PECAN GROWING IN NORTH FLORIDA—AN ATTRACTIVE INDUSTRY

EDITOR NATIONAL NURSERYMAN.

The crop of pecan nuts this year in the region of Monticello, Fla., was very good indeed and all the young grafted or budded trees old enough to bear gave a fine crop. I saw some Vandeman nuts from a ten year old tree that was extra fine, even though this sort has rather a black eye in this locality. A number of very promising seedlings have also shown up.

Yesterday on the farm of Mr. Barrows I saw three year old trees that had made between 5 x 6 feet of growth the past season. Some of our own two year trees made between 2 and 3 ft. of wood.

The grove planting here is not so heavy as last winter but there will be at least 2000 acres planted near here by the end of this winter. That includes all ages. I think there will be about 3000 acres planted near Albany, Ga., this winter. This added to the area already in orchards in that section will bring the nut orchards up to a total of nine or ten thousand acres.

The nurseries in and about Monticello are practically sold out of trees for this winter and most of them are going to Dougherty County, Ga. Stone of Thomasville and Wight of Cario are sending a good many there also. The season has been dry but the growth in the nursery rows has been very satisfactory.

The nurseries here are doing their best to prepare for the future trade and are grafting about as follows:

The Nut Nursery	125,000 grafts
Arcadia	75,000 "
Jefferson Nursery	50,000 "
Monticello Nursery	40,000 "
Miller & Gossard	100,000 "
	<hr/>
	390,000 "

Other nurseries are also putting in the usual numbers.

Men are saying that a grow of grafted pecans 20 years old is worth \$1000 per acre. This I think conservative. The outlook is certainly very bright and I think it is bound to be a great industry for this section.

H. D. SIMPSON.

THE LIMITATION OF THE SATSUMA ORANGE TO TRIFOLIATE-ORANGE STOCK

The author of this bulletin draws attention to the salient and important fact that the Satsuma orange is practically limited to the Trifoliate stock and is a "complete failure on a sour orange stock when almost all other citrus fruits can be grown successfully." The Trifoliate or Hardy Orange was introduced by the Department of Agriculture in 1869. Its home is in China and Japan where for many centuries it has been used as a stock for the propagation of citrus fruits. The author concludes with a warning to growers against purchase of Satsuma oranges on sour orange stocks. The Bureau of Plant Industry "will undertake temporarily to determine free of charge whether or not nursery stock of citrus fruits is grafted on Trifoliate-Orange stock."

Quiz Column

THE GIANT GRAPE VINE, NITRATE OF SODA AGAIN
NATIONAL NURSERYMAN PUBLISHING CO.,
Rochester, N. Y.

Gentlemen:

1. I notice an article in your November number in regard to a giant grape vine at Hampton Court, England. Will you kindly let us know if it will be possible to secure any cuttings from this vine, if so, how to go about it. Are the grapes large and of fine product?

2. I also notice a letter from West Bros., Damasus, Ohio, that they had great success with nitrate of soda on a block of apples using it according to your instructions. Will you please let us know when to apply, how much to apply, and, greatly oblige. Like Mr. West, we certainly are pleased with your paper and think we could not get along without it.

We enclose stamped envelope for reply.

THE GLOBE NURSERIES,
Per W. M. WOOD.

ANSWER.—1. The grape vine described in our November number is a specimen of the Black Hamburg variety and a very wonderful example of the development of that well known kind. This variety belongs to the European species *Vitis vinifera*, which does not succeed in this country except on the Pacific Coast and in certain parts of the arid Southwest. While it would probably ripen with you in either Virginia or Tennessee it is not likely that it would prove to be adapted to your locality. The European grape has never succeeded, although tried many times, in Eastern United States.

It is possible though doubtful, that cuttings might be secured by writing the steward of Hampton Castle, Hampton Court, England. The fruit of Black Hamburg is one of the standards grown under glass in this country and produces a bunch of large size and very good quality.

2. We have answered several letters on the question of using a quick acting fertilizer like Nitrate of Soda on nursery stock which seemed to need a tonic. In the case of apple stock or other nursery stock requiring something in the way of food which would stimulate growth we would suggest applying the fertilizer early in June in your locality. This means that the first application should be made early in the early part of the month and a second application towards the end of the month. Probably 500 lbs. to the acre in these two applications would be sufficient. Nitrate of Soda becomes available as soon as there is water enough in the soil to dissolve it. It should be applied on the surface and worked in very lightly. In the case of young nursery stock it should be applied along the line of the row. Care should be taken to distribute it evenly for large doses may do more harm than good.—EDITOR.

PORT ARTHUR, Tex.—C. D. Otis, a nurseryman of Lake Charles, La., is, it is understood, seeking the promotion of a plan to convert the famous Gates experimental farm into a nursery and experimental farm for the propagation of fruit and other trees, and on which are to be built greenhouses and other buildings for growing ferns and palms.

Business Movements

Rice Brothers Company of Geneva, N. Y., has certified to the secretary of the state of New York that it has increased its capital stock from \$35,000 to \$45,000. The certificate is signed by John P. Rice and Terrance W. Rice.

During the month of January, N. G. Merritt, Dunkirk, N. Y., and Nelson Boque, Batavia, N. Y., called at the NATIONAL NURSERYMAN office.

The Willedean Nurseries, Warsaw, Ky., has issued a beautiful calendar for the current year. A forest scene is represented in colors true to nature.

Geo. S. Josselyn, the foremost fisherman among nurserymen, was in Rochester, to attend the meeting of the Western New York Horticultural Society, January 26-27.

T. P. Rice of Rice Bros., Geneva, N. Y., attended the meeting of the Western New York Horticultural Society at Rochester, N. Y.

During the month of January many prominent nurserymen of New York were in Rochester for the meeting of the New York Fruit Grower's Society and the Western New York Horticultural Society. W. C. Barry is president of the latter.

DEMAND KEEN IN KANSAS

EDITOR NATIONAL NURSERYMAN,
Dear Sir:

In answer to your favor of December 3d, asking us to send you a few lines on any phase of the nursery work that we care to write about, will say that our ideas are about the same as we have already expressed thru your columns.

Trees of quality are in demand by planters all over the United States far in excess of the supply. Planters are willing to pay for these trees, four times as much money as other trees are being offered at, which do not meet requirements. The man who has genuine goods at this time is not afraid to have them inspected and examined by strict tree inspectors. Our experience has been in shipping a great many carloads of stock to western planters, where the state inspectors are very strict that we have always been dealt with in a courteous and just way.

In short the nursery business is undergoing a change. The people who are progressive and up to date, furnishing improved stock will be successful and the nurseries who still furnish root knot Apple, crown gall trees and those affected by aphids covered with a liberal dose of mud will find in our judgment a considerable amount of grief and will probably be great kickers about the injustices being done them.

For true horticulturists and progressive nurserymen, growing stock of quality, the field is great, and the future bright, while for the opposite class the field is dark and the future outlook worse.

THE WINFIELD NURSERY CO.,
Per J. MONCRIFF.

CARLINVILLE, ILL. Will B. Otwell is discontinuing his nursery business and is advertising his growing stock for sale.

TRANSPORTATION MATTERS

Messrs. Reed of Vincennes and Sizemore of Stark Bros. Co., attended the meeting of the Western Classification committee recently in San Antonio, Texas. Mr. Sizemore says, "We make a general canvass among the members about uniform classification and believe that the majority, if not all of them, will be in favor of the Western classification schedule covering nursery stock."

It transpires also that some fine samples of Stark Bros. apples played an important part in fixing the attention of the company upon matters horticultural. The stomach is often the direct route to a man's sympathy.

A SOCIAL EVENING AT WM. H. MOON CO.

On the evening of the 14th the Wm. H. Moon Co. of Morrisville, Pa., gave a dinner for their foremen and office men, about sixteen in all.

After a bounteous meal of oysters, turkey, and the dainties of the season a lecture was given by Henry T. Moon on "Nurseries and Points of Horticultural Interest at Home and Abroad," with over 150 illustrations by lantern slides.

Short speeches were made by members of the firm and others, and music was rendered by some of those present.

One picture of particular interest to those present was that of two pear trees, sold by the great-grand-father of the present proprietors in 1775. These trees are still standing in good condition and bearing fruit. This was the first sale on record in this family which has been engaged in horticulture down to the present day.

Their establishment known as Glenwood Nurseries now covers nearly 500 acres and is almost exclusively devoted to the growing of ornamentals.

CATALOGUES RECEIVED DECEMBER 1909 AND JANUARY 1910

The Coe-Mortimer Co., Special importers, 24 Stone St., New York City. Folder on Up-to-date Fruit Growing with Thomas Phosphate Powder.

From the B. G. Pratt Co., Manufacturing Chemists, 50 Church St., New York, Memorandum book for 1910 containing just the kind of general information one wants at hand, together with price list folders of "Scalecide" and "Sulfocide."

Price lists from the American Sprayer Co., Winter & E. Sts., Minneapolis, Minn., of their Eureka Compressed Air Spraying Outfit, Wallace Pressure Regulator and Load Controller and net price list of Spraying Accessories.

Hood Farm Almanac for 1910 published by the Hood Farm, C. I. Hood, Proprietor, Lowell, Mass., containing information of value to farmers and stock owners, with description of Hood Farm remedies.

From the E. I. Du Pont de Nemours Powder Co., Wilmington, Del., comes a neat little folder on the subject of Dynamite in the Orchard.

From L. F. Dintelmann, Nurseryman, Belleville, Ill., comes a beautiful lithograph calendar for the New Year. It is a reproduction of Harry C. Edwards' painting—"Sunset in the Adirondacks."

The "Friend" Mfg. Co., Gasport, N. Y., greets us with two handsomely colored cards, accompanied by a bulletin descriptive of their new improved model of Power Sprayer.

From Vaughan's Seed Store, 25 Barclay St., New York, comes a little memorandum book, vest-pocket size, bound in leather, labeled "Vaughan's 1910 Calendar for Gardeners." This little calendar, full of useful information and suggestions for the gardener, cannot fail to prove of value to the recipient.

The Griffing Brothers Co., Nurserymen, Jacksonville, Florida. 1910 Tree Catalog.

GRAPE

Headquarters for standard varieties. I have select wood, 500M Concord; 200M Worden; 200M Moore's Early; 100M Niagara; 100M Champion; 100M Delaware; 10M Cottage and a number of M of other varieties. Correspondence invited.—The best packing.

CUTTINGS

CHARLES C. NASH, - Kalamazoo, Mich.

ESTABLISHED IN 1897

EM. Van ESPEN, President

CENTRAL PHOSPHATE COMPANY

Miners of High Grade Florida, Tennessee and South Carolina Phosphate; TENNESSEE RAW GROUND PHOSPHATE ROCK, all grades

Address

MT. PLEASANT, TENNESSEE and 18 CHAUSSEE D'ANTIN, PARIS, FRANCE

LAFER'S INSECTICIDE Will destroy Scale, Insects, Grubs, Borers, Root Aphis and Blight on Fruit Trees, etc., by absorption by roots, producing inoculation of the sap. Work guaranteed. Free pamphlets. J. W. LAFER, Station B, R. F. D. No. 2, Box 2 A, Toledo, Ohio.

FOR SALE--Western Nursery

Forty acres of deeded and forty acres of leased land. Stock all salable size; clean and healthy; not a scale or bug. Trade has almost doubled each year. We ship 5 to 12 hundred miles west and north of us. Trade to be supplied unlimited. We have a complete general line of Nursery Stock. We do a strict catalogue business. Are well advertised and have a good name.

Will sell for cash, or part cash and time on balance to a man who knows his business and is a pusher. This is a good investment and will pay a good dividend. Address

"NURSERYMAN"

care of NATIONAL NURSERYMAN, this office.

Quality First!

CONCORD VINES A SPECIALTY

Extra heavy grades in two-year and one-year stock.

We offer Lining Out Stock as well.

We are vineyardists as well as nurserymen.

N. G. & J. T. MERRITT, Dunkirk, N. Y.



The only pruner made that cuts from both sides of the limb and does not bruise the bark.

MADE IN ALL STYLES AND SIZES

We pay Express charges on all orders.

Write for circular and prices.

RHODES MFG. CO., Grand Rapids, Mich. Dept. M.

CONFEDERATION OF GERMAN NURSERYMEN

(BUND DEUTSCHER BAUMSCHULENBESTIZER AT DRESDEN.)

An assembly of this very important body of Nurserymen took place in September, which was well attended by members of the trade from all parts of the country, and an account of the proceedings now lies before us. These consist of reports of the various speeches and discussions on matters concerning the nursery business in all its bearings. The writers of the reports were Hubert Muller (Manager of Meeting), Alwin Lorgus, Paul Hauber, Ch. Mohrenweiser, R. Stern, Director Jahn, Hermes (Zehlendorf), H. Jungclausen, Ch. Mullerklein, Max Huth, Muller (Jungsfeld) F. Schuemann, Kurdewan (Schwiebud), F. Bohm, and Heinrich Wimmer (business manager) Folkewitz-Dresden.

The President of the Confederation opened the sitting, bidding the visitors and members a hearty welcome, and especially acknowledging the praiseworthy work of the Bund, and the various unions having similar or allied aims, the Presidents and representatives of which were present as guests.

A letter from Graf von Schwerin, President of the German Dendrological Society, was read, expressing the wish that the Confederation would succeed in all its endeavours. The Dendrological Society is closely allied with the Confederation of German Nurserymen.

THE REPORT CONCERNING THE WORK DONE IN 1908-9

The circle of the branch societies is now complete for the whole of Germany. In Baden the union of the traders had become loosened, but under the direction of a more energetic president, a fresh start has been made, and 45 members announced their adhesion at once. On January 15th the President called a meeting of Nurserymen at Strasburg, and he personally invited them to a meeting on August 1st, and the Alsations forthwith joined the Confederation but the Lorrainers refused to join it. It will be for the Confederation to take suitable measures, if in the future, the latter should still hold aloof.

The business done at the central station with the single branches, has greatly increased, and the work is steadily on the up grade. Difficulties are examined, disputes adjusted, differences of opinion made clear, questions concerning every branch of nurserywork and management come constantly under its purview.

The system of making offers of plants, trees, etc., much below market prices, especially by foreigners, was one of the subjects discussed; and a wish expressed that this manner of trading should be checked and eventually got rid of. The members are now awakened as to its evil effects, and hope to co-operate with the editors of the Gardening Journals by making clear their duty in this matter; and offering an equivalent to them in the shape of more abundant advertisements for any loss they may sustain.

On the 8th of November, 1908, the President was invited to a private interview by the Minister for Home Affairs, in regard to the San Jose Scale Insect, and the Gooseberry Mildew (American), and the Confederation has issued a manifesto in reference to combatting these pests; as also to the spread of fungoid diseases, and methods for their limitation.

The International Agricultural and Horticultural Congress at Orleans, on August 31st last, was briefly alluded to; but this has already been fully dealt with in our columns.

The question of minimum prices for nursery articles was discussed by the Nurserymen; and H. Stern-Brochkau stated that the "minimum price" arrangements had withstood the test during the last two years, and proved its value; but several Unions seem to have placed but little value on the effort to equalize prices. A further recasting of the minimum price regulations is called for, as with the exception of Fruit Trees, no prices for nursery stuff have been arranged.

The book furnishes price lists of articles hitherto in force, and likewise a proposed lowest price list for fruit trees, fruit bushes, shrubs and avenue trees, in three classes; also a list of Union prices for sale to retailers.—*Exchange.*

WANTED A Practical Foreman for Nursery.
A good job to the right man.

Write at once to

W. E. McELDERRY, Princeton, Indiana

FOR SPRING OF 1910

We have our usual supply of NURSERY STOCK
We still have a few hundred thousand Scions to offer

John A. Cannedy Nursery and Orchard Co.
Carrollton, Ill.

HEADQUARTERS FOR

Pure Speciosa Catalpa and Black Locust Seedlings

Write for Prices

COOPER & ROGERS, Winfield, Kansas

Wanted---SMALL ORNAMENTAL STOCK

for lining out. Also Pear 1 1-2 to 2 inch; Cal. Apple, 1 1-2 to 2 inch. Large Carolina Poplars and Elm

BEAUDRY'S NURSERY CO.

1747 Railway Exchange - - - Chicago, Illinois

HOPEDALE NURSERIES, - Hopedale, Illinois

3,000 Specimen Arborvitae, mostly 2 to 3 feet, and 3 to 4 feet.
5,000 Silver Maple 1 in. to 2 in. Cal.; 3,000 Box Elder, 6 to 8 and 8 to 10 feet; 10,000 Carolina Poplar, 2 ft. up to 14 ft.; 1,000 White Spruce, mostly 18 to 36 in.; 3,000 Black Sugar Maple, 2 to 4 ft.; also Birch, Sugar Maple, Ash, Linden, Catalpa, Tulip Trees, Sycamore, etc.

IN SHRUBS: 1,000 Pussy Willow; 1,500 Jap. Quince; 1,000 Spirea A. W.; 1,000 Af. Tamarac and Lilacs, Syringa, Hydranga Aborens, Witch Hazel, Calycanthus, Althea, Cal. Privet, White Fringe and a lot of others.

IN VINES: 4,000 Chinese Trailing Honeysuckle, Wild Grapes, Bitter Sweet, Wisteria, Trumpet Vines, etc.

2,000 Dahlias, 2,000 Yucca Lillies, Lemon Lillies and other Perennials. 500,000 Box Elder, Maple, Walnut, Catalpa, Locust, Persimmon, Oak, etc.

DON'T FORGET that we collect annually many hundreds of thousands of the beautiful native Orchids, Ferns, Perennials, Trees and Shrubs and tons of Tree Seed. This is a side line that has grown to considerable proportions.

Let us quote on anything that you want in Ornamentals.

HOPEDALE NURSERIES, - Hopedale, Illinois

Waxahachie Nursery Company

Waxahachie, Texas

28,000 Peach, 1 to 2 feet	31,200 Peach, 2 to 3 feet
The above in twenty-four varieties. Nice clean stock.	
7,000 Plum, 1 to 2 ft.	7,000 Plum, 2 to 3 feet
4,000 Pear, 3/4 to 1 inch	5,000 Pear, 5/8 to 3/4 inch
4,000 Pear, 9-16 to 5/8 inch	Bartlett, Clapp's Duchess,
Flemish Beauty, B. de Anjou	1000 Kieffer, 4 to 6 feet
2,000 Kieffer, 2 to 3 feet	
5,000 Cherry, 1 to 2 feet	5,000 Cherry, 2 to 3 feet
7,000 Cherry, 3 to 4 feet	3,000 Cherry, 4 to 6 feet

One Year. Fine Roots. Clean.

5,000 Surplus Roses Strong Dormant Buds
One Year, 2,000 American Beauty

Let us quote you on the above. Correspondence solicited.

WAXAHACHIE NURSERY CO., Waxahachie Texas

Our Book Table

POPULAR FRUIT GROWING. 5½x7¾, 299 pp., illust. Author, S. B. Green, Professor of Horticulture and Forestry, University of Minnesota. The Webb Pub. Co., St. Paul. Price \$1.00.

This volume under date of February 15, 1909, is the second edition of this work which is a text designed for high schools and colleges. As its name indicates it treats the subject popularly. It is a book for the amateur rather than for the commercial grower of the East or the West. It includes three chapters on enemies of the orchard and how to control them, which in these days of specialization are looked upon by the pomologist as belonging to the field of the entomologist and the plant pathologist. The book is the outgrowth of the author's experience as a teacher in a school of Agriculture in Minnesota and represents a very admirable method of presenting a general view of fruit growing to a class of students in a school of secondary school grade. We should imagine that the volume would be of service in high schools and academies, or perhaps, county agricultural schools and undoubtedly of great value to the fruit grower in the upper Mississippi Valley.

BEASLEY'S CHRISTMAS PARTY, by Booth Tarkington. Harper Brothers Company, New York.

A whimsical tale that sparkles with good humor and bubbles over with life. It is in the same strain as others of Tarkington's books and shows the same artistic touch and emphasis. It should have a place in the Nurseryman's library for all will enjoy reading it.

NORTHERN LIGHTS by Gilbert Parker. Harper Brothers Company.

The predominating note in this collection of stories is that of native manhood and the virility of the out-of-doors men and women. The stories possess that strength and fire that makes Parker's works so fascinating and inspiring. It is refreshing to leave the problem novels and turn to these pages so full of red-blooded life and incident; there is a spirit of the out-of-doors in all of them.

AMONG THE EXPERIMENT STATION WORKERS

Bulletin No. 90, Bureau Plant Industry. Peppermint. Being a description of the culture, manufacture and export of peppermint oil, by Alice Henkel.

Bulletin 69, in two parts, Bureau of Chemistry. These publications are devoted to federal and state laws relating to the control of foods, with special reference of course to their adulteration. These publications are of considerable value and should be in the hands of all persons interested in this important matter.

Louisiana State Crop Pest Commission. Circular No. 4. by Wilmon Newell, is devoted to the San Jose Scale, its nature and habits. First rate advice is also given in reference to the detection and control of the insect.

Louisiana Crop Pest Commission. Circular No. 2 contains the proceedings of the second annual meeting of the Boll Weevil Convention. A pamphlet of 150 pages devoted exclusively to this arch enemy of the cotton crop.

"PROGRESS IN AGRICULTURAL EDUCATION, 1906"

This pamphlet of 100 or more pages by Dick J. Crosby is a reprint from the annual report of the Office of the Experiment Stations for 1906. It is descriptive of the present status and advance of educational work along agricultural lines during 1906. To all those who are interested in the field the report is not only of great value, but encouragement, and a source of inspiration. The work of the experiment stations and colleges of agriculture in this country is brought up to date, and this is supplemented by a description of the work in similar institutions in the old country.

ESTABLISHED 1869

H. DEN OUDEN & SON

Old Farm Nurseries

BOSKOOP, HOLLAND

WHOLESALE GROWERS OF

Japanese Maples	Hydrangeas	Spruces
Hardy Azaleas	Kalmias	Shrubs
Buxus	Magnolias	Roses, etc., etc.
Clematis	Paeonies	
Conifers (Specialty)	Rhododendrons	

All the above at very reasonable prices

Ask for special cheap offer

Japanese Bamboo Canes

For delivery January to March 1910

BOOK YOUR ORDER EARLY

	Per 100	Per 500	Per 1000	Per 5000
12 feet long	\$2.70	\$13.00	25.00	\$120.00
14 " "	3.70	17.50	34.00	160.00
16 " "	5.30	25.00	49.00	230.00

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50 Barclay Street, New York

E. T. DICKINSON,

Chatenay Seine, France.

Grower and Exporter of

French Nursery Stocks, Dutch Bulbs,
Gladioli, Etc. Fruit Tree Stocks.

All grown specially for the American trade.

PEAR AND CRAB APPLE SEED,

The most complete assortment of Ornamental Stocks,
Trees and Shrubs.

Geo. E. Dickinson, 1 Broadway, N. Y.

Surplus Stock, Spring 1909

50,000 PEACH TREES, 1 yr. from bud.

10,000 APPLE, 1 yr. from bud.

100,000,000 STRAWBERRY PLANTS in six leading sorts.

MYER No. 1, AROMA, STEVEN'S CHAMPION.

Superior.

Gandy.

A general assortment of other stock.

D. S. MYER & SON,

Bridgeville, Del.

PEACH SEED

We now have in stock VIRGINIA NATURAL PEACH SEED
crop 1908, can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,

4th Ave. & Clinton St., BALTIMORE, MD

SHERMAN NURSERY COMPANY

CHARLES CITY, IOWA.

Large Growers
of

HARDY STOCK

In the
Northwest

Over 20,000,000 Evergreens in stock, 1,000,000 Grape, 5,000,000 Apple, and 100,000 Plum are counted among our assortment this year. We are also extensive growers of a general line of Hardy Nursery Stock.

AGENTS WANTED

With the Advertisers

NEW FRUITS

The Superlative red raspberry was introduced into England by a Mr. Barnhart. A. Mitting imported 5000 plants in 1907 for trial and they proved so far superior to existing kinds that in 1908 he imported 10,000 more plants. These he sold and did not have enough to go around. In 1909, he imported 10,000 more beside his own growing and sold all in five weeks and could have sold 100,000 if he had them. The Superlative is a strong upright grower. The fruit stands upright and does not hang down like other raspberries. It is a continual cropper from spring to fall when the fruiting canes are heavy in fruit another cane or more is in process of growing to fruit as soon as the early cane is through and so continues through the season. Each fruiting cane has as many as from 400 to 500 fruits to the cane. It is best not to leave more than 4 canes to the hill. It does best in hills 4 feet each way and in June of each season to mulch heavy with stable manure, leaves or old straw. This gives the plants steady moisture all summer that all berries like. The new canes should be pinched when 4 feet high. The canes of the Superlative are very stiff and need no support. They grow from 5 to 6 feet high and like a rich sandy loam with good drainage. The berry of the Superlative is a rich velvety crimson in color. The berry is pointed, one to one and a quarter inch long and three-fourths of an inch in diameter. It is solid with small core and can be shipped in quart baskets. It is a good canning berry, of a rich, sweet flavor and will give twice the amount of berries to the acre given by the old Cuthbert. It's a commercial berry and a money maker.

H. J. MITTING.

A NEW BERRY, HIMALAYA GIANT

This berry is a new arrival from the north slope of the Himalaya mountains, 6,000 feet above the sea level. It is black but not a blackberry. For many centuries the natives of that country have been making wine of it and only the recent invasion by British troops has brought this delightful, luscious fruit to our civilization. The vine is a vigorous grower, making a growth of from 20 to 30 feet in one year which can be trained on a fence or arbor similar to grape vines. The enormous clusters of large sized berries ripen all summer making the Himalaya the most productive of all varieties known. They have no core and the flavor is sweet. The severity of their native climate has made the berries hardy and both plant and fruit will stand extremes of heat and cold better than any other variety.

BERRYDALE EXPERIMENT GARDENS.

A WESTERN VIEW OF PRUNING

GEO. W. FERGUSON, Washington

"Scientific pruning is one of the most vital factors in fruit growing in that it permits of the free circulation of light and air through the branches of trees, thus making possible the production of uniform fruit of color, size and lusciousness."

"The training of the tree to produce the best quality fruit is the factor now dominant among fruit growers. Many who have not devoted time to study the methods of the tree entertain the idea that more fruit is produced by making the tree healthier through this operation. This statement, obvious to a careful student of horticulture, is erroneous. It is consistent to say that a tree grows as nature intended that it should, and it is an encroachment to alter its growth in narrowing it into a channel unproposed by nature.

"The prime objects of pruning are to allow circulation of light and air through the branches. It should not be merely a custom.

"Sunlight should reach every twig. The sap should flow to every leaf proportionately. This is what assists in the later production of a luscious fruit with quality that will find a ready market.

Just because one man who has had success in pruning and raising good fruit prunes at a certain time should not mean that another

WANTED

Black Caps, (100,000), Apple, (3-4 Yearlings), Peach, Cherry and Pear Stocks (Seedlings), and Peach to line out. Write us what you can furnish. Give prices, varieties and amounts.

CALDWELL NURSERY COMPANY, Caldwell, Idaho

Splendid assortment of standard and new sorts. Now is the best time to engage all varieties, and the only time to secure some varieties. Send list of approximate wants for lining out.

THE LEEDLE FLORAL COMPANY® EXPERT ROSE GROWERS
SPRINGFIELD, OHIO

GRAPE VINES A SPECIALTY

T. S. Hubbard Company

FREDONIA, N. Y.

ESTABLISHED 43 YEARS

We offer for Fall and Spring trade a large and complete stock of one and two year old GRAPE VINES in strong grades for nurserymen and dealers trade.

We also have an extra nice stock of one year CURRANTS. Send us your want list for prices.

HEDGE 200,000 CALIFORNIA PRIVET 200,000 HEDGE
250,000 AMOOR RIVER PRIVET 250,000

We also have 150,000 each in California and Amoor River in 6 to 15 inch for lining out. These are well rooted plants and will make fine stock for delivery next fall.

VALDESIAN NURSERIES

Bostic Department

BOSTIC, NORTH CAROLINA

FOR SALE

Carolina Poplar, American Arbor Vitae, California Privet, 2 to 3 feet, well branched, very fine, and 5000 1-yr. Apple, well rooted and clean.

R. R. HARRIS - Harrisville, W. Va.

General Line of NURSERY STOCK

1 year Peach, Berberis Thunbergii, Ibota Privet and White, Scotch, and Austrian Pine

M. T. TWOMEY, 10 Tremont St., BOSTON, Mass.

PEONIES

ONLY BY THE WHOLESALE

Let me send you my list of OVER ONE HUNDRED Best Varieties J. F. ROSENFELD, - - - WEST POINT, NEBR.

L. F. DINTELMANN, Belleville, Ill.

Apple, Pear, Peach, Cherry and Plum Trees, Evergreens, Ornamental Shrubs, Roses, Gladiolus, Cannas and Dahlias

Nurserymen Should Try My Simplex Tree Baler

IT DOES THE WORK. PRICE \$16.00.

Special 20,000 California Privet.

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor

(Successor to Blair & Kaufman)

233-234 Rialto Bldg., Kansas City, Mo.

Offer for FALL 1909 and SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

can do likewise. Pruning is a phase of fruit growing in which reason and precision must be exercised. The apple tree must not be an object of butchering because it happens that it needs pruning and because of superfluous branches. In the first pruning, a grower should exercise the greatest care. The head and the members of shoots with which to start the career of the tree are factors requiring study and attention.

"With a tree that has many branches close together it will be observed that the fruit may be large, but is lacking in both essentials, color and lusciousness. In this case the superfluous limbs should be cut away in such a manner as to allow sunlight to pass down the tree and spread impartially through it.

"Careful study of local conditions has disclosed the fact that every grower must not do as his neighbor has done in recent years or what he intends to do; but he must understand that it is essential to devote his attention to the many peculiarities existing in his own orchard. Each variety of fruit as well as the peculiarities of the variety must receive attention. No two trees can be or should be pruned alike."

Obituary

Among the noted florists and plantsmen who have recently passed away are Charles Burpee of New Brunswick, Canada, a relative of W. Atlee Burpee, of Philadelphia; Robert Schmidt, Baltimore, of the London Park Cemetery; Alexander Nelson, Superintendent of Arsenal Park, Pittsburg, Pa.; William K. Harris, prominent florist of Philadelphia.

A PIONEER HORTICULTURIST GONE

Another of the pioneers in Texas horticulture has gone to rest.

J. F. Leyendecker, of Frelsburg, Colorado county, died on August 8. In less than two months he would have been 70 years old. He was born in Neuhausel, Germany, and emigrated to this country with his father and family in 1843, and has resided in one place there sixty-five years. He was educated at old Independence University in Washington county, under Dr. Baylor, and married Miss Frances Stanger, and they raised a family of six boys and six girls, four of whom are yet living. He served as justice of the peace and county commissioner for eighteen years, also as county tax collector, and was a member of the Thirteenth legislature in 1873.

During the war he was a member of the Seventeenth Texas Volunteers and saw hard times.

In all my life I never heard one speak of him except to praise. He loved horticulture intensely and would have been widely known if he had written for the press but half of his experiments and what he observed. He was probably the first one in the state to grow fruit of Japan persimmons, and the Le Conte pears.

He seemed always first in having new fruits bear, but he was so modest and retiring in his nature that one had to ask him to learn these things. He was a member of our State Nut Growers' association and was present a year ago when the question came up about budding pecans on hickory, but he exhibited the same variety of nuts in two lots—one lot grown from a bud on pecan, and the other on hickory. In his quiet way he has kept up a good nursery for about thirty-five years, and was one of the first in the state to become proficient in budding pecans. The nursery will be continued by his daughter, Miss Carrie, and others of the family.

Those Germans who came to Texas before the war and settled chiefly in the range extending from Gillespie county southeastward to the Gulf prairie, for honor and industry, in my estimation, stand at the very head of the citizenship of our country. I can say nothing better of this good and true man than that he was one of the best of this class. His section of the state is better because he lived in it. Anyone who knew him was made better. His useful, contented, happy life is a model worthy of being commended to all men everywhere, both young and old.

I am glad I can feel that the unknown waters were inviting to him, and the shore beyond was glowing with fruits and flowers, where he could hear the merry laugh of children and the songs of the birds he loved and protected.

F. T. RAMSEY,
Austin, Texas.

California Privet Fruit and Shade Trees Evergreens

SAMUEL C. DE COU

Moorestown, Burlington County, N. J.

Easterly Nursery Co., CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

WE make a specialty of collecting accounts for the Trade.

For particulars and references, address the

National Florists' Board of Trade,

56 Pine Street - - - - - New York City

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FREDONIA, N. Y.

Successor to WHEELLOCK & CLARK

AT IT SEVENTEEN YEARS

For Fall 1909 and SPRING 1910

GRAPE VINES AND CURRANT PLANTS

GRAPE AND CURRANT CUTTINGS

CORRESPONDENCE SOLICITED

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our **HOLLAND NURSERY**. Some of the goods on hand here during the packing season.

ALL NURSERYMEN SHOULD BE INTERESTED IN COMMERCIAL FERTILIZERS

The American Fertilizer is a monthly magazine, devoted exclusively to the fertilizer industry. Sample copy free.

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THE AMERICAN FERTILIZER

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CATALPA SPECIOSA Seedlings

LARGE OR SMALL LOTS

BLACK LOCUST SEEDLINGS

Please let me know your wants

J. A. GAGE, Fairbury, Nebr.

A BARGAIN IN STANDARD PEARS.

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

RECLAIMING A SWAMP

Writing in the *Rural New Yorker*, January 15, W. N. Scarff, of New Carlisle, Ohio, gives his solution of a reclamation problem. The article was accompanied by illustrations which make clear the nature of the undertaking and the methods employed.

"The pictures show some work we did last winter in reclaiming a 40-acre swamp. The illustrations show the workmen excavating and the method of cribbing to keep the sand and gravel from rolling in, also the ditch after the sewer was laid and the cribbing pulled out. The sewer is fully 10 feet under the bottom of the ditch, as shown in the illustration. The length of the main ditch is just one-half mile. The average depth of the sewer is 15 feet, with over 500 feet of a 20 to 23-foot dig. Almost all of this distance was through gravel and sand, making it necessary to crib with two-inch planks 16 feet long. The work was very dangerous owing to the treacherous gravel and sand and the immense pressure of same on the sides of the cribbing. It was necessary to resort to many different plans to accomplish the work.

"The best bid we could get from a contractor for the labor alone was \$6,000. We used 18-inch sewer pipe, which alone required 12 cars to haul it in. We considered the bids we had on the work entirely too high, and determined to undertake the work ourselves, which we did, and had it done by local helpers with a good foreman to superintend it, feeling confident that the work could be accomplished at a much less figure than the bids at hand. We accomplished the work, including cost of all sewer, drain tile, labor and everything, complete for \$3,000, just half the bid for labor as made by our contractor. After the half mile of sewer was laid through the deep cut it was then necessary to run a system of common drain throughout the entire 40-acre tract in order to carry the water off quickly after heavy rainfalls. We used for this purpose twelve, ten, eight and six inch tile.

"The system has worked perfectly, and we feel that it will be even better in the years to come than now, as the water will establish natural channels which will carry it off rapidly. The rainfall this year was far above the average, and at no time did we have any surface water upon the land. Without the tile we would have had at least three feet of water over the entire tract. We have a fall of seven feet for the one-half mile, which empties the water nicely; however, we have laid the sewer with a fall of three feet for the one-half mile. This brings us into the tract to be drained just four feet underneath the surface, giving us fine fall for all lateral ditches.

The question that will naturally come up in the minds of your readers is whether the tract reclaimed will justify the enormous outlay. We had two prime reasons for attempting this work. The tract lies near our dwelling, and we did not consider it healthy to have this body of stagnant water so near; beside it was an unsightly place, covered with weeds, willows and rushes. Another reason was that it was considered by everyone an impossibility to drain this particular tract, as it had been attempted several times. About 40 years ago it was undertaken by the township, and an immense amount of money spent on it without accom-

The Westminster Nursery

Westminster, Md.

OFFERS

200,000 ASPARAGUS ASST. 2 year plants
 50,000 RASPBERRY PLANTS, extra fine Kansas, Eureka and Cumberland
 50,000 CATALPA SPEC. SEEDLINGS
 50,000 BLACK LOCUST SEEDLINGS
 PRIVET IN GRADES. CAROLINA POPLARS, 6 to 15 feet
 Get our prices before you buy.

FOR SALE

Well equipped Nursery Plant with good, thriving retail business in the heart of Michigan Fruit belt. For particulars write "EQUIPPED" NATIONAL NURSERYMAN.

WANTED-- We expect to increase our capacity and are in the market for quantities of Nursery stock (mainly young stock) of all kinds at bargain prices. Quality must be of the best. What have you?

PITTSBURG NURSERY CO., Pittsburg, Kansas
 117 W. 5th St.

WANTED

A young man to take charge of a force of salesmen. A good place for someone. Please state if you have had any experience. Address

M, care of National Nurseryman.

WANTED

Peach Seed, Currant, Gooseberry and Poplar Cuttings
 State price and amount you can furnish

OAK HILL NURSERIES, Franklin, Mass.

WANTED--Grafters

Permanent work to experienced men who are skillful budders, or grafting at our plants, at Dansville, N. Y., Rolla, Mo., Farmington, Ark. and Louisiana, Mo. Address nearest office.

STARK BRO'S NURSERIES & ORCHARDS CO.

WE OFFER one year's subscription to the NATIONAL NURSERYMAN and one copy of Webster's New Illustrated Dictionary, 1,100 pages, limp leather binding, red edges, round corners, for \$2.50. The Dictionary is a condensed Encyclopedia, containing all the information required by the business man. This offer holds good on renewals or advance subscriptions. Dictionary itself retails at \$2.50.

NATIONAL NURSERYMAN
 ROCHESTER, NEW YORK

plishing anything, as their efforts were a complete failure. Another attempt was made later but of no avail. So the matter was given up, and the tract of land was considered of little or no value. We purchased it at a very low price, not with any intention of reclaiming, but because it adjoined our homestead and squared the boundary line. Strangers would often ask why we did not drain this pond. We had to answer and say that it could not be done; and after a time the desire to see this particular work accomplished grew so strong that we had several surveys made, running lines in an altogether different direction than had ever been run before and over a course that was considered quite out of the question, owing to the deep cut, as before described. After finding we had the fall we were quick to make up our minds that we would attempt the work, feeling sure that it could be accomplished. We began the job about December 1, and by April 1, we had it completed ready for crop.

"The soil in this tract is of the very finest, as it is made up from decayed vegetable matter altogether with the fertile soil washed from the surrounding fields and farms. It will stand continuous cropping for many generations; and for the purpose for which we will use it it will be worth \$500 per acre, as we intend to lay it off in small tracts and use for trucking and propagating nursery stock. The tests we have made this year prove it to be very fertile, as the potatoes are yielding at the rate of 300 bushels per acre, corn 100 bushels per acre, and all other crops in like proportion. We feel highly elated over our success in this work, and think it will prove a paying investment from a financial standpoint."

FROM UTAH

"Nursery stock of all kinds is pretty well sold out now, with the apple sales again running sixty per cent Jonathan, Rome Beauty, and Winesap, trying for second place; Elberta Peach selling well but not so strong as past two years.

Provo, Utah.

B. H. BOWER,
Provo Nurseries.

ANNOUNCEMENT

Having bought all the stock in the Company of Jacs. Smits Ltd., Nurseries, Naarden (Holland) we will continue the business of foresaid company for our account under the firm of Jacs. Smits & Co.

It will be our policy to continue the friendly relations, which you had with Jacs. Smits Ltd., to send out first-class stuff at moderate prices and to do all that is possible to satisfy our customers.

Requesting you to take notice of our signatures, we remain,

Respectfully yours,
JACS. SMITS,
P. DWARS.

Naarden, January, 1910.

Enclosed find \$1.00 for a renewal of NATIONAL NURSERYMAN. We do not want to be without it, and are glad that you remind us when same expires. Do not fail to keep on sending as we do not want to miss a single copy.

CHAS. ERNST.

Trees That You Can Sell "On Honor"

Your professional reputation depends upon the trees you sell. An order of "named" trees that turn out to be something else will often do you untold injury. Doubtless you have often found it difficult to secure "true-named" specimens, which require to be grown in the South. But here is a satisfactory solution of this difficulty: Trees from

Glen Saint Mary Nurseries

are true to name, and you can sell them "on honor." Our system of growing and grading, and the rigid test every variety gets in our Trial Orchards, keeps up a standard that few Nurseries can approach. Large orchards now in bearing throughout the South prove the excellent quality of our trees. Full particulars, Catalog and Wholesale Price List mailed on request.

Glen Saint Mary Nurseries Co., Glen St. Mary, Florida

Trees-Seeds

1,553 ACRES DEVOTED TO GROWING
Hardy Nursery Stock

AND PURE BRED TESTED

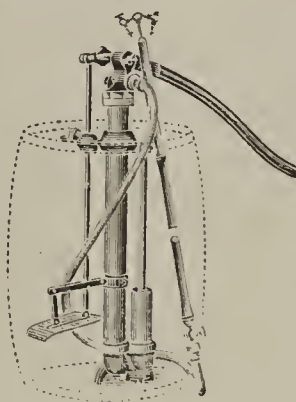
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Send for Catalogs OWATONNA, MINN



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A GOOD SPRAY PUMP EARNS BIG PROFITS AND LASTS FOR YEARS

The Eclipse is a good pump. As practical fruit growers were using common sprayers in our own orchards—found their defects and invented the Eclipse. Its success forced us to manufacturing on a large scale. You take no chances. We have done all the experimenting.

Large fully illustrated Catalog and Treatise on Spraying FREE

MORRILL & MORLEY, Benton Harbor, Mich.

WANTED

By one of the oldest and largest retail nursery firms in Western New York—An experienced sales manager for agents covering Pennsylvania, New Jersey, Maryland, Delaware, Virginia and West Virginia. Must have good knowledge of this territory. A good opportunity for the right man. State experience and salary expected. All letters strictly confidential.

Address, E. E. S., care National Nurseryman.

Forest Trees! Forest Seeds!

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Seedlings and Transplanted. By the Million.

PETER SCHOTT, KNITTELSHEIM,

Rheinpfalz (Palatinate), Germany

Wholesale Seeds and Nurseryman. Establishment for Drying Coniferous Seeds.

Established 1784

The oldest established Seed and Nursery Business in Germany. Descriptive Catalogues free on application.

Largest Grower in America of

Grape Vines

Other Specialties
Currants and Gooseberries

Introducer of Campbell's Early Grape, Josselyn
Gooseberry, Fay Currant.

Over thirty years with no change whatever
in ownership or management.

Our main business is the growing of unusually high grade stock suitable for the proper filling of Nurseyman's Retail Orders. There being no standard for grading above kinds of stock, every grower of the same is at perfect liberty to adopt his own ideas for growing and grading and alter the same as often as he sees fit.

Our stock this season has made very heavy growth and we have ordered extra boxing to meet this necessity. Box and packing free.

Prices reasonable, but not always lower than are generally quoted for light rooted stock.

Please send us your list of wants.

George S. Josselyn,

Fredonia, - New York.

First-Class Stock for February and March Delivery

Peach 7-16 and up to 1 inch	Chines Cling 80	Greensboro 500
Sneed 800	Triumph 1000	E. Crawford 600
Waterloo 200	Emma 100	Stephen 100
L. Crawford 1400	Stump 1200	Elberta 3000
Smock 400	Old Mixon F 500	Gen. Lee 1001
Heath 1200	Baldwin 100	Popular [Pyramidalis] 200
	Snow Cling 100	

Kieffer pear 1-2 in. and up to 1 1-8 3000 and a few other pears.
Cherry 1-2 in. and up to 1 1-8 Richmond, Dyehouse and Gov. Wood.
Carolina Poplar, Box Elder, Catalpa, Althea and Lilac, white, purple.
Send want list and get prices.

C. C. DAVIS,
Rose Hill, - - - Va.

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Old Dominion Nurseries
RICHMOND, VA.

We offer

CALIFORNIA PRIVET, one year extra fine
ASPARAGUS, one year
BARTLETT STANDARD PEARS, 2 year, nice stock
CHERRY, 2 year, strong, extra fine, sour varieties
HEMLOCK SPRUCE, mostly 3 to 4 feet
NATURAL PEACH PITS, crop 1909

Write for prices

1840

OLD COLONY NURSERIES

HARDY SHRUBS TREES, VINES
EVERGREENS AND PERENNIALS

A large and fine stock of well-rooted plants grown in sandy loam. Good plants; best sizes for planting very cheap. Priced catalog free on application.

WHOLESALE AND RETAIL

T. R. WATSON, Plymouth, Mass.

1910

GRAPE VINES

Large Stock, properly graded.
None better in the Chautauqua Belt.
Let us know your wants.

Miner & Miner

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SAN-U-ZAY SCALE OIL

CONTAINS NO ACID, AMMONIA, SOAP OR ANY
CAUSTIC MATERIAL

Can be used as a summer spray in nursery work.

Costs about half the cost of other sprays.

25 years' experience in the manufacture of soluble oils,
back of our product.

WRITE FOR OUR PRINTED MATTER

Gives in full, Scores of Reports

F. G. STREET & CO., 17 Railroad St., ROCHESTER, N. Y.

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

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WILLETT & WHEELOCK

have a splendid stock of the following Raspberry Plants

Kansas, Black Diamond, Palmers Early, Cumberland and Plum Farmer. Large stock of Early King and other Red Raspberries

Grape Vines and other small fruits for the wholesale trade. Also fine lot of Columbian (Purple) Raspberry Plants. PRICES RIGHT.

WILLETT & WHEELOCK, North Collins, N. Y.

CAROLINA POPLAR BOX ELDER
CALIFORNIA PRIVET and CATALPA SPECIOSA

ALL ONE YEAR OLD

For further particulars and prices, address

SOUTHWESTERN NURSERY COMPANY

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BOX STRAPS

WARD-DICKEY STEEL COMPANY

INDIANA HARBOR, IND. Mfrs. of Planished Sheet Steel

ORNAMENTAL STOCKS

NURSERIES
420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for **WHOLESALE**
CATALOGUES

TRANSON BROS. & D. DAUVESSE'S NURSERIES,

16 Route d'Olivet

BARBIER and CO., Successors,

Orleans, France

FRITSCH & BECKER

WHOLESALE SEEDSMEN

at GROSSTABARZ, Thurigia, GERMANY

are prepared to accept contracts on the following
Specialties for

DELIVERY FALL 1909

FRESH SEEDS of MULBERRY, WILD CHERRY,
MAHALEB CHERRY, PLUM, QUINCE, APPLE,
PEAR, DOG ROSE, BLACK AND HONEY
LOCUST and many other sorts.

Price List on application
WANTED: American Evergreen Tree Seeds
Offers will oblige

Vincennes Nurseries

W. C. REED, Prop., - VINCENNES, IND.

OFFER FOR FALL 1909

Cherry 2 Year in Car Lots

Cherry 1 Year in Car Lots

Our Cherry promises very fine both in 1 and 2 year.
Also general line of other Nursery Stock.

Cherry Buds to offer in any quantity in season ready
to cut July 1st.

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FRUIT AND SEED FARMS

OFFER for Fall 1909 and Spring 1910

GRAPE VINES—One and two years old. Varieties
largely Moore's Early, Concord and Niagara.

Also Scarlet or Crimson Clover Seed and Cow Peas.
Free from weed seeds, all cleaned and guaranteed
first class.

Correspondence solicited. Price list upon request.

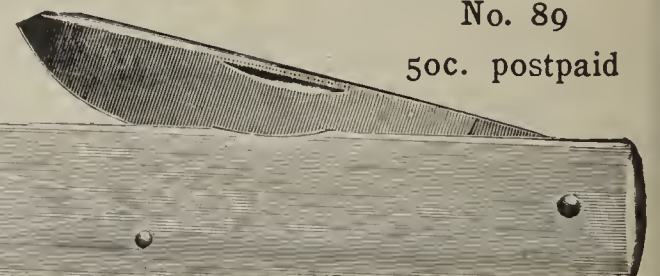
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P. O. Address, Salisbury, Wicomico County, Md., R. F. C. 3
Long Distance Phone and Telegraph, Salisbury, Md.



GRAFTING KNIFE NO. 2, \$1.80 doz. Postpaid.

MAHER & GROSH WAR-
RANTED KNIVES.



FLORISTS' KNIFE

White Handle

No. 89

50c. postpaid

Pocket Grafting Knives, 30, 40 and 50c. each. Nursery Pruner, 50c. postpaid. Nursery Budder, 25c. post-
paid. Pocket Budder, 35c. postpaid.

The FLORIST KNIFE—No. 89, as shown, 50c.; 6 for \$2.50. No. 89 1/2 has
grafting point blade, same price. These blades are equal to any razor in
fineness.

Send for 12 page Nursery Tool Catalogue.

MAHER & GROSH CO., 90 A St., TOLEDO, OHIO

WANTED--March 15.

A Nurseryman of experience
in packing and grading and
also a herbaceous man. CHAS. R. FISH & CO., Worcester, Mass.

WANTED--Your Nursery List.

We offer at almost
cost of labor—Apple
and Pear Scions, Snyder and Early Harvest Blackberry Plants and Root Cut-
tings [large stock]. Terms Cash. **WESTERN NURSERY Green-**
wood, Mo.

When writing to Advertisers mention The National Nurseryman.

5 YEARS' use has proven that SAN JOSE SCALE

and all FUNGOUS diseases, controllable during the dormant season, are absolutely controlled by the use of

“SCALECIDE”

There is but one—“PRATT S” Trade Mark, Reg. U. S. Pat. Off.

Prices: In barrels and half-barrels, 50c per gallon; 10 gal. cans, \$6.00; 5 gal. cans, \$3.25; 1 gal. cans, \$1.00. If you want cheap oils, our “CARBOLEINE” at 30c per gallon is the equal of ANYTHING ELSE. Send for free booklet, “Orchard Insurance.”

B. G. PRATT COMPANY, Mfg. Chemists, 50 CHURCH ST., NEW YORK CITY

ROSES - SHRUBS - CANNAS - PHLOX
JAPANESE IRIS - HERBACEOUS PAEONIES

ALL FIELD GROWN

Teas, Hybrid Teas, Hybrid Perpetuals, Mosses, Rugosas, Climbers, Ramblers Creepers. Thirty Types. Over Three Hundred Varieties.

Planting for the season of 1909-1910 is the heaviest in our history. Varieties are the BEST and QUALITY is there, better than ever before.

We want to figure with you Mr. Nurseryman on your future orders. We have the goods—QUALITY—QUANTITY—VARIETY—and can make the prices! Your correspondence will get “quick” action.

The United States Nursery Co.

RICH, Coahoma County, MISS.

YOUNGERS & CO.

GENEVA, NEB.

APPLE TREES

Shade and Ornamental Trees

Russian Golden Willow

SEEDLINGS CATALPA SPECIOSA

HONEY LOCUST OSAGE ORANGE

Flowering Shrubs and Evergreens

Write for prices

Osage Hedge, One Year Extra Fine

Grown for us at Rossville, Kansas on deep sandy soil. Famous for fine roots.

This Osage Hedge in Car Lots, cannot fail to please. BLACK LOCUST, RUSSIAN MULBERRY, HONEY LOCUST.

SPECIOSA CATALPA, Selected seed, guaranteed pure, our specialty for past ten years, grown by the million.

FANCY SHADE TREES CAR LOTS. Ash, Box Elder, Black Locust, Catalpa Speciosa, American White Elm, Soft or Silver Maple.

The Winfield Nursery Co.

(INCORPORATED)

J. MONCRIEF, Pres.

R. I. LEMON, Sec'y-Treas.

WINFIELD, KANSAS

J. H. SKINNER & CO.

Station “A,” Topeka, Kansas.

Fruit, Shade and

Ornamental Trees

∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

ESTABLISHED 1868

F. W. MENERAY

Crescent Nursery Co.

COUNCIL BLUFFS, IOWA

We offer our large stock of PAEONIES at a special low price for Fall 1909 and Spring 1910. Also a large stock of Cherries, Plums, Pears, Gooseberries, Deciduous Trees and Ornamental Shrubs.

SPECIAL ATTENTION—Complete list to dealers in car-load lots.

Established 1780.

Andre LeRoy Nurseries

BRAULT & SON, Directors

ANGERS, FRANCE,

are now booking orders for

SEASON, 1909

FOR NURSERY STOCKS OF THEIR OWN
GROWING, GRADING AND PACKING.

For Quotations apply to

ANDRE L. CAUSSE, Sole Agent,

105-107 Hudson Street :: :: New York City.

When writing to Advertisers mention the National Nurseryman.

PIERRE SEBIRE & SON

NURSERIES AT USSY, CALVADOS, FRANCE

A general assortment of Fruit Tree Stocks, such as Apple, Pear, Myrobalan Plum, Mahaleb and Mazzard Cherry, Angers Quince, etc. Forest Trees, Ornamentals, Evergreen Seedlings, Roses, etc. The largest stock in the country. Prices very low. The very best grading and packing. Send for quotations before placing your orders elsewhere. Catalogue free.

Sole Agents for United States and Canada. C. C. ABEL & CO., 110-116 Broad Street, NEW YORK.

"Foundations of American Grape Culture"

By T. V. MUNSON

America's greatest grape authority.

"It easily surpasses anything that has been done on grapes in America to date."—C. L. Yates.

252 pages, 7½ by 10 inches, 90 full page half-tone engravings. Heavy glazed paper. Buckram binding, embossed in gold leaf letters.

Sent post or express free for \$3.00, by

T. V. MUNSON & SON, Publishers, Denison, Texas

C. S. Harrison's Select Nursery

YORK, NEBRASKA

has one of the finest collections of
EVERGREENS, ORNAMENTALS, PEONIES and
PERENNIALS in all the West.

SPECIALTIES

Rocky Mt. Conifer Seeds

Norway Poplar Cuttings

Manuals on the Peony

Phlox, Iris and Evergreens, 25 cents each in stamps.

Burbank's Giant Himalaya Blackberry
Burbank's Mammoth Blackberry
Burbank's Phenominal Berry
Early Crandall Blackberry, Dewberry
and Logan Berry Plants
Strawberry Plants

We are the largest growers to the trade in above line on the Pacific coast. Plants are packed lightly and successfully shipped anywhere. Write for wholesale price list at once.

G. H. HOPKINS & SON, Burbank, Calif.

200,000 Cherry Trees

One and Two Years; vigorous, healthy, at right prices—
all "BAGBY" grown—none better.

A Full Line of Other Nursery Stock

WRITE FOR PRICES

New Haven Nurseries, NEW HAVEN,
MO.



Japan Pear Seed

We have a limited quantity of Japanese Pear Seed of this seasons' crop and the seed is of the best quality.

The value of Japanese seed is well known—one of our customers uses about 200 pounds every year and finds it far superior to the French Seed as the grafts two and three years old will make nearly double the French in growth.

French Pear and Kieffer Pear Seed are very scarce this year. Our supply is exhausted. If you want any of the Japan seed, place your order at once.

Young Ornamental Stock for Nursery Rows

Our price-list of young ornamental stock for lining out this year comprises a vast assortment of young stock suitable for planting in Nursery rows and first class in every respect, with prices that are right. Just what you want. The list is now ready. Have you a copy? If not let us know and we will gladly send it to you.

We grow an exceptionally fine grade of plants, true to name. Nurserymen and growers all over the country buy our young stock. Why? Because our plants give results and a good return for their investment. Our sales every year amount to over a million plants.

Send for the list at once so that you may place your order early and have your wants reserved for you. Remember this is an interesting list and the stock goes fast.

THOMAS MEEHAN & SONS, Inc.

Wholesale Nurserymen

P. O. Box No. 2

DRESHER, PENNA.

LEVAVASSEUR & SONS, Nurseries at Ussy and Orleans, FRANCE

Wholesale Growers of Fruit Tree Stocks, Ornamentals, Evergreen Seedlings, etc. Best Grading Quality, and Packing. Largest shippers to this country. All leading nursery men are our regular customers. Orders booked now for delivery for season of 1910. Compare prices quoted in last Trade list. For catalogues and price list address us or our

American Agents, AUGUST RÖLKER & SONS, New York, 31 Barclay Street or P. O. Box 752.



Everything in

Small Fruit Plants.

Ask for price list.

W. N. SCARFF, New Carlisle, O.

Lucretia Dewberry

FIELD PLANTS—LARGE QUANTITY

Large Assortment of
PAEONIES

Prices Right

GILBERT H. WILD
Sarcxie, Mo.

CHERRY TREES

An especially fine lot of one and two year Cherry, on which we can make attractive prices. They are especially well rooted, with clean, vigorous, well-branched tops; also

California Privet Keiffer Pears
Satsuma Oranges Carolina Poplar
Budded and Seedling Pecans

— Write for Prices —

Tennessee Wholesale Nurseries, Inc.
WINCHESTER, TENN.

Successors to J. C. Hale

AUBREY FRINK, Manager

Budded Pecan Trees

Japan Persimmon, Japan Walnut,
and Muscadine Grape Vines . .

Are Leaders to the Trade this Year.

We also offer a general line of Nursery Stock, including Fruit and Ornamental Trees, Shrubbery, Field-Grown Roses, Etc., Etc. Prices always right.

THE GRIFFING BROS. CO.,
JACKSONVILLE, FLA.

BIG SURPLUS OF CONCORD GRAPE VINES, CHEAP!

3 year No. 1; 2 year No. 1; 1 year No. 1; 1 year No. 2 and
1 year No. 3; all carefully graded up to highest standard.

Also full stock of other varieties and Small Fruits

LEWIS ROESCH & SON, Fredonia, N. Y.

Hydrangea Arborescens Grandiflora

(American Everblooming Hydrangea)

We offer the largest stock of strong 2 year old plants in America of this finest HARDY ornamental Shrub introduced in fifty years and at extremely attractive prices.

Also strong plants of Teas' **SNOWBALL HYDRANGEA** (*Hydrangea Cinerea Sterilis*) a native species, distinct from the first mentioned, but a fitting companion to it. We have the only considerable stock of this plant in the world.

Also Flowering Shrubs, Peonies, Lilies, Dahlias, Gladiolus, Iris, Hardy Herbaceous plants in great variety. Lists free.

E. Y. TEAS
Centerville, Ind.

The New England Nurseries, Inc.
BEDFORD, MASS.

**HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
HERBACEOUS PERENNIALS**

We grow everything required for Orchard, Garden,
Lawn and Landscape Planting.

Catalog and Trade-list on application.

F. J. Grootendorst & Sons
BOSKOOP, HOLLAND

Azaleas, Rhododendrons, Clematis, Roses, Pot-grown
Plants for forcing. Buxus, Conifers, Japanese
Maples, Shrubs, Palms, Bulbs, Etc.

A postal brings our catalogue

LET US QUOTE PRICES ON YOUR LIST OF WANTS

Small Fruit Plants

FOR THE NURSERY TRADE

SPRING 1910

**Black and Purple Raspberry Tips
Gooseberry Layer Plants**

Red Raspberry, Blackberry, Dewberry, Strawberry,
Rhubarb, Asparagus and Horseradish
Orange-Quince and Gooseberry Cuttings
Everything in Small Fruit Plants

Write for Prices

P. D. BERRY, R. F. D. No. 3, Dayton, O.

Surplus Stock

American Limes 8 to 10 feet.
American Limes 10 to 12 feet 1 1/2 in. cal.
American Limes 12 to 14 feet 1 1/2 to 2 in. cal.
Dutch Limes }
Dasystyla Limes } same sizes

ASK OUR SPECIAL QUOTATIONS.

Juliana Nurseries,

OUDENBOSCH (Holland)

F. H. STANNARD & CO.

**The Ottawa Star Nurseries
OTTAWA, KANSAS**

APPLE TREES, assorted, all grades.

CHERRY TREES, assorted, all grades.

PEAR TREES, assorted, all grades.

GRAPE VINES, assorted.

**A large and complete assortment of Shade Trees
APPLE AND FOREST TREE SEEDLINGS**

We call special attention to our

CATALPA SPECIOSA SEEDLINGS

Fumigation with Hydrocyanic Acid Gas Generated From Cyanide ⁹⁸/₉₉%

Is the only positive eradicator of San Jose
Scale and other Insect Pests. Endorsed
by all agricultural experiment stations.

Manufactured by

The Roessler & Hasslacher Chemical Co.

100 WILLIAM ST., NEW YORK

35TH YEAR

Pan Handle Nurseries

WE OFFER A COMPLETE ASSORTMENT OF NURSERY
STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust "
Small Fruits	Syringeas	Fruit Tree "
Maple Norway	Clematis	Catalpa Speciosa Seed.
Maple Schwedlers	Honey Suckle	Etc., Etc., Etc.
Maple Silver	Wistaria	

Our stock is well grown and graded. Prices are such that it will pay to
investigate. Come and see us or write.

J. K. HENBY & SON

GREENFIELD, IND.

For Fall 1909

We wish to Call Attention to Our Offerings of

PEACH—One Year and June Buds. We invite inquiries NOW from
buyers of June Budded peach, plum and apricot. We will bud especially
to suit YOUR particular wants.

PLUM—De Soto, Wyant and Japanese varieties.

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

PRIVET—California and (true) Amoor River.

ROSES—Leading Hybrid Perpetuals, also Hardy Climbers.

MAGNOLIA Grandiflora, SPIREA Van Houttei and ALTHEAS.

Fraser Nursery Company

Incorporated

HUNTSVILLE, ALABAMA

WOOD LABELS

For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, com-
bined with the quality of our product is unsurpassed.

Samples and prices are at the command of a com-
munication from you.

Dayton Fruit Tree Label Co.

South Canal St., Dayton, Ohio

Crating Lumber

Get Delivered Prices from

T. SULLIVAN & CO.,

BUFFALO, N. Y.

FOR SPRING 1910

We have the largest and most complete assortment of Ornamental Trees, Shrubs and Herbaceous Plants we have ever grown. Also Tree Seedlings in large variety.

We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

The Willadean Nurseries
WARSAW, KENTUCKY.

DREER SPECIALS

Hardy Perennials, Paeonies, Iris, Hardy and Tender Water Lilies and Aquatics, Hardy Vines and Climbers, Decorative Greenhouse Plants, Palms, Ferns, Ficus, Araucarias, etc.

Bay Trees and Trained Box Woods, Hardy Rhododendrons, Azaleas, etc.

Flower and Vegetable Seeds, Bulbs, Implements, etc.

Wholesale catalogue issued quarterly and sent to the trade only. Write for a copy.

HENRY A. DREER, PHILADELPHIA, PA.

Northern Grown Nursery Stock

We Grow a General Assortment of Trees, Shrubs, Vines, Roses and Herbaceous Perennials, Etc.

Prices Reasonable. Wholesale Trade List for the Asking.

The Bay State Nurseries, North Abington, Mass.

Charles Detriche, Senior

ANGERS, FRANCE

Grower and Exporter of Fruit-Tree Stocks, Forest Tree Seedlings, Rose Stocks, Shrubs, Vines, and Conifers for Nursery Planting.

ANNOUNCES

That his new price list has just been printed and that copies may be had by addressing his Sole Representatives for the United States and Canada.

JACKSON & PERKINS CO.

NEWARK, N. Y.

100,000

California Privet

EXTRA STOCKY PLANTS, 2 YEARS

They go quick at bargain prices.

ARCADIA NURSERIES

Monticello, Florida

FINE TEXAS UMBRELLA

GENUINE
with perfectly
formed tops

JOHN A. YOUNG

Greensboro Nurseries

Greensboro :: N. Carolina

FOR SALE

50,000,000 Strawberry Plants

ORDER NOW FOR FALL

I want every grower to investigate my new "Tennessee Favorite,"—The very best berry grown for the market,—size, color, flavor and shipping qualities considered. Even in size throughout season I picked and sold from one acre 4,456 quarts at a net profit of 11 cents a quart making a total profit of \$491.16 in the Spring of 1908. For the season of 1909 I shipped 194 crates per acre, which net \$2.52 per crate. To vouch for the truth of this statement, I refer anyone to M. Fugazzi & Co., Cincinnati, Ohio, who handled these shipments.

In my thirty years' experience I have found nothing quite its equal. Does best in low, strong land. Try them. Other varieties, Aromas, Klondyke, Lady Thompson, Excelsior.

A. HORN, R. F. D. 3, Soddy, Tenn.

LABELS for NURSERYMEN

Plain or
Printed

The Benjamin Chase Co Derry Village, N.H.

Ben Davis

WANTED, MARCH 1st, experienced nursery-man. Married man preferred. Steady work, good position for right man. Give particulars, salary wanted, full description and references in first letter.

PITTSBURG NURSERY CO., Pittsburg, Kansas
No. 117 W. 5th St.

SOMETHING NEW--The Strawberry - Raspberry. I have an excellent lot of these plants for the market and having fruited this berry for the past four seasons, recommend the planting of them. Also a nice lot of the Cumberland raspberry plants and a complete line of Nursery Stock. Write for prices. Address

LOUIS H. FRESE, Prop., Forest Oak Nurseries, Quincy, Ill.

Pennsylvania Nursery Company

Nurseries in Crawford and Erie Cos.

Complete Line of General Nursery Stock.

FOREMAN WANTED.—Man who thoroughly understands growing ornamentals of all kinds. Sober.

We are in the market for stock ready for sale and stocks for nursery planting. Write for our surplus list.

Pennsylvania Nursery Co., - - Girard, Pa.



Hydrangea
Arborescens
Grandiflora
"Hills of Snow"

Choice strong
plants for
Spring 1910

J. W. McNARY
Dayton, Ohio

Strawberry Plants

Lusty, healthy, mountain-grown stock

MILLIONS OF THEM

Excelsior, Bubach, Klondyke, Lady Thompson, Aroma,
Gandy and all the best Commercial Varieties.

CHATTANOOGA NURSERIES

200 Mission Ridge, CHATTANOOGA, TENN.

W. B. COLE

PAINESVILLE, OHIO

Never had a better growing season or better stock of strong $\frac{3}{4}$ inch and up:

Bartlett Standard Pears Lombard Plums
Duchess Dwarf Pears Sweet and Sour Cherries

—also—

California Privet & Roses Sugar Maple, 6-8 and 8-10 ft.

This is not all. Write for trade list.

To Destroy Aphis and Thrips

WITHOUT INJURY TO FOLIAGE

SPRAY WITH

"BLACKLEAF" TOBACCO EXTRACT

LISTEN TO THESE

ROGUE RIVER (OREGON) FRUIT GROWERS' UNION: "Black Leaf" does not burn nor injure the foliage or the fruit and will eradicate the aphis immediately.

DELTA COUNTY (COLO.) FRUIT GROWERS' ASS'N: "Black Leaf" is the best remedy we have ever found for plant lice on fruit trees.

PROF. GILLETTE, of the COLORADO Exp. Station: We have found "Black Leaf" very satisfactory indeed.

HOOD RIVER (OREGON) APPLE GROWERS' UNION: We are satisfied "Black Leaf" is going to take the place of all other aphis sprays in this section.

MR. A. N. JUDD, Watsonville, Cal.: For all plant lice, and green and black aphis, "Black Leaf" Tobacco Extract is the most gratifying of all washes.

PRICE: In 5-gal. jacket cans, 85c per gal.; in 1-gal. cans, \$1; f. o. b. Louisville, Ky. The usual Western price is 90c to 95c per gal. in 5-gal. cans, owing to increased freight.

USUAL DILUTION: For Green and Woolly Aphis, and Black Peach Aphis, 1 gal. "Black Leaf" in 65 or 75 gals. water. For Thrips, 1 to 50 or 60.

TO SAVE YOU FREIGHT: Write us for name of agent nearest you

The Kentucky Tobacco Product Co., Inc.
LOUISVILLE KENTUCKY

Apple Seedlings

WE HAVE

350,000 No. 3

475,000 No. 4

They are good, strong grades---clean---and in fine condition.

Orders booked subject to samples which will be sent by express upon request.

◆ ◆ ◆

F. W. Watson & Co.
Topeka, Kansas

Strawberry Plants

MY BUSINESS for several seasons has been growing very rapidly, and the season just past has far exceeded any former year. I have therefore been compelled to increase my acreage to meet the growing demand for my plants, and I expect this Summer to build an additional, large, up-to-date packing house, so that my daily output of plants will be greatly increased during the shipping season. This will enable me to handle promptly all orders that I receive. If you buy Strawberry Plants, get in communication with me before contracting for your next season's supply.

W. W. THOMAS

"THE STRAWBERRY PLANT MAN."
ANNA, ILLINOIS.

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil, climate and expert knowledge.

Take a look at the stock or ask for a sample and be convinced of the *extra quality* of their

TREES

H. M. Simpson & Sons,
Vincennes, Indiana

Ornamental Trees and Shrubs

*A large assortment of first class
stock in all sizes*

Cherry Trees

*Thrifty, well grown, carefully graded,
the kind that will please you*

SPRING LIST IS READY

ARTHUR BRYANT & SON
Princeton, Ill.

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ "; strong on Bartletts.. Also Cherry all grades. 2 yr. Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and 10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acuminata; Norway Maple; Silver Maple; Car. Poplars under 1 $\frac{1}{2}$ inch.

A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

Berberry Thunbergi

BUSHY PLANTS, 12 to 18 inches

SEEDLINGS, 3 to 5 inches, 2 to 3 inches, with 6 inch roots.

CAROLINA POPLAR

2 years, clean and smooth, nicely branched, 10 to 12 feet, 8 to 10 feet, 7 to 8 feet.

NORWAY SPRUCE

Several times transplanted. 3 to 4 feet, 2 to 3 feet, 18 to 24 inches.

ARBOR VITAE

Transplanted. 3 to 4 feet and 2 to 3 feet.

CALIFORNIA PRIVET

2 year cut back. Extra heavy, 3 to 4 feet, No. 1, 3 to 4 feet, and 1 year 18 to 24 inches.

This is the best stock GOOD GROWING can produce. We are long on these items and the price will please you.

C. R. Burr & Company

The Burr Nurseries
MANCHESTER, CONN.

Evergreen

and

Forest Tree Seedlings

in Large Quantities

A FULL LINE OF

Specimen Evergreens
Ornamental Trees
Shrubs

WRITE FOR CATALOGUE

R. DOUGLAS' SONS

WAUKEGAN, ILLS.
Established 1848

Mt. Arbor Nurseries

E. S. WELCH, Prop.
SHENANDOAH, OHIO

Apple Seedlings

A Surplus of Straight and Branched Roots: all Grades
American Grown and Imported
Prices on Application

Apple Grafts

Piece and Whole Root, made to order
Pear Seedlings, French and Japan
Catalpa Speciosa Seedlings
Cherry Trees in Surplus

A Large and Complete Line of General Nursery Stock

SUPERIOR STORAGE facilities enabling us to make shipments at any time.

California Privet Hedge Plants . .

is our specialty. We grow them by the millions for the wholesale trade in all sizes from 6 inches up to 3 feet.

Let us have your want list to price before you order elsewhere. We can save you money on your Spring orders.

THE LANCASTER COUNTY NURSERIES

DAVID S. HERR, Proprietor

R. F. D. No. 7

LANCASTER, PENNA.

WANTED-- We want to revise our mailing list and if your name is not already on our new list send us your name and address and we will mail you our price lists for the next five years. Do this at once if you want our regular price lists.

Apple Seedlings

We have some surplus, both *American and French* grown. All grades for grafting and budding.

IMPORTED FRUIT TREE STOCKS

Now arriving—Cherry, Pear and Plum Stocks

ALL GRADES

Apple Grafts

Piece and Whole Root

ORDER QUICKLY

Also a complete line of General Nursery Stock; mostly in storage.

SEND LIST FOR PRICES

WANTED---APPLE SCIONS

Shenandoah Nurseries

D. S. LAKE, Prop.

Shenandoah, Iowa

Willis Nurseries

Ottawa, Kansas

Choice Nursery Stock for Spring 1910

including

APPLES, CHERRY, PEACH, PLUM,

PEAR, GRAPES, SMALL FRUITS,

FOREST SEEDLINGS and SHADE TREES

SHRUBS and ROSES

Send us your list of wants and let us make
you prices.

A. Willis & Co.



The Printing Point

Good typewritten letters convey an impression of good business methods, and the machine is often responsible for the appearance.

The UNDERWOOD

types always reach the proper printing point. The type-bar operates through—or with—a guide—a feature peculiar to the Underwood. The type *must* go right. There's no other way. It cannot wobble. Good looking work is assured and the Underwood features prevent operator's blunders.

The simple mechanism which secures perfect work in the Underwood is a mighty interesting exhibit of ingenuity and skill. Why not come look at it? Knowledge of the Underwood will help you to secure greater efficiency. It will be a pleasure to help you to just as much knowledge of the Underwood Standard Typewriter as you choose to acquire.

“The Machine You Will Eventually Buy”

UNDERWOOD TYPEWRITER CO., Inc.

25 Clinton Ave. South, Rochester, N. Y.

25,000 Two Year Cherry Trees for Spring 1910

Our Cherry Trees were sprayed several times during the summer and held their foliage until Fall. They have nice straight body without any knots or scars and well formed heads, with good system of roots. This is an ideal lot of trees every way.

VARIETIES—Montmorency, May Duke, Ea. Richmond, Olivet, Dyehouse.

Heavy on MONTMORENCY. Fully half will run 3-4 inch up, balance 5-8 to 3-4, 5 to 6 feet.

Inducements made on early orders.

Parties wanting Cherry Trees can save money by corresponding.

Marble City Nursery Co.

Knoxville, Tenn.

Strawberry Plants

Red & Black Raspberry Plants

Millions of them and the finest stock we have ever grown.

We can quote you more attractive prices now than after the season is further advanced.

DON'T place your orders before receiving our estimates.

WRITE US TODAY

David Knight & Son
Sawyer, Mich.

EVERGREENS

LARGE STOCK, BOTH SEEDLINGS AND TRANSPLANTS, OF

SPRUCE
PINES
FIRS
CEDARS

ARBOR VITAE
HEMLOCKS
JUNIPERS
YEWS

FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
BLACK LOCUST
MAPLES
OAKS
LINDENS
BEECH
CHESTNUT

ASH
WALNUT
ELM
BOX ELDER
BIRCH
EUROP. LARCH
WILD BLACK CHERRY

*Advance Price List of Evergreen and Forest Tree Seedlings
now Ready*

D. HILL

EVERGREEN SPECIALIST
DUNDEE, ILLINOIS

Save Your \$ \$ \$

Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are fine.

We will also have our usual assortment of Fruits both large and small.

Shades, Shrubs, Perennials and Forest Tree Seedlings

Want Lists will receive immediate attention

C. M. Hobbs & Sons

BRIDGEPORT, IND.

Nursery Stock

Walter Charles Slocock GOLDSWORTH NURSERY

WOKING, SURREY, Eng.

HAS THE USUAL EXTENSIVE STOCK OF
THE FOLLOWING:

CONIFERS including a quantity of well shaped specimens for decorative purposes. Low prices can be quoted on all Conifers.

HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES.

ROSES, Standards, Dwarfs and others.

MANETTI and other ROSE STOCKS.

FRUIT TREES in large quantities.

Transplanted FRUIT TREE STOCKS.

RHODODENDRONS and other AMERICAN PLANTS.

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Strong field grown ROSES,
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Flowers single, in loosely pyramidal clusters. Color deep yellowish pink, a shade darker than Lady Duncan,, slightly lighter tint towards center. Stamens very bright orange. Flowers full, round, capped.

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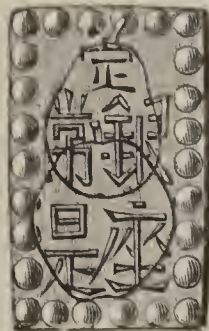
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PEARS—Assorted leading varieties. One and two yrs. old.
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PRIVET—Amoor River. Retains its foliage longer and holds its color better than Colifornia Privet.
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WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.
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ARBOR VITAE, 2 to 8 ft.

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These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

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Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants.

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Offer a General Line of Nursery Stock

APPLE, Keiffer and Garber Pear, Peach,
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Our Native Plum are extra heavy and fine

GRAPES, Small Fruits, Shrubs

And a large line of

Forest Tree Seedlings

A FINE LOT OF SHADE TREES

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Andromeda Floribunda, 20,000 to offer in bushy well grown plants 6 in. to 18 in.

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Hybrid Tea, Tea, Polyantha and Hybrid Perpetual Roses, strong field-grown stock as Standards, Half Standards and Dwarfs in all leading varieties.

Copper Beech, selected seedling, specially good strain 3 to 9 ft.

Fruit Trees, trained, Espalier and Fan shaped.

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Retinospora Plumosa and Plumosa Aurea 6 in. to 6 ft.

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" Ithota, 1 and 2 year.

Strawberry Plants, best varieties.

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In large Shade Trees we have Sugar Maples, Elms, Box Elder, Catalpas, Evergreens, Roses, Etc., Etc.

Would accept orders to bud Peach on contract. Can commence shipping October 1st, or earlier.

Send us your want list.

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BUSHY PLANTS, 12 to 18 inches

SEEDLINGS, 3 to 5 inches, 2 to 3 inches, with 6 inch roots.

CAROLINA POPLAR

2 years, clean and smooth, nicely branched, 10 to 12 feet, 8 to 10 feet, 7 to 8 feet.

NORWAY SPRUCE

Several times transplanted. 3 to 4 feet, 2 to 3 feet, 18 to 24 inches.

ARBOR VITAE

Transplanted. 3 to 4 feet and 2 to 3 feet.

CALIFORNIA PRIVET

2 year cut back. Extra heavy, 3 to 4 feet, No. 1, 3 to 4 feet, and 1 year 18 to 24 inches.

This is the best stock GOOD GROWING can produce. We are long on these items and the price will please you.

C. R. Burr & Company

The Burr Nurseries
MANCHESTER, CONN.

Evergreen

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A FULL LINE OF

Specimen Evergreens
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Prices reasonable, but not always lower than are generally quoted for light rooted stock.

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California Privet Hedge Plants . .

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The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

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Vol. XVIII.

ROCHESTER, N. Y., MARCH, 1910

No. 3

THE CAMPAIGN AGAINST ENEMIES OF THE NURSERY AND ORCHARDS

Spraying is at once a type of investment and an insurance. It is a direct investment in which the returns are much larger than the expenditure. It is an insurance all the time. The underlying principle is prevention. Success comes to the forehanded man. The best information available on the latest phases of spraying is to be found in this issue.

THE LESSER APPLE LEAF-FOLDER

By R. L. WEBSTER

Recent Injury to Nursery Stock in Iowa.—During past years several Iowa nurseries which grow large quantities of apple stock have been seriously troubled by a small green caterpillar which folds or ties up the young tender leaves of the growing trees, stunting the growth of the stock. This small caterpillar is known as the "lesser apple leaf-folder," on account of its habit of folding apple leaves. Plum stock also is attacked, as well as apple stock. The scientific name of this pest is *Peronea minuta*.

In 1908, the Entomological section of the Iowa Experiment station took up the study of this insect and made some spraying experiments to determine how it might best be controlled. The result of this work has thrown considerable light on the habits of this leaf-folder in the nursery and definite information can now be given for the critical times to spray for the pest.

Appearance of the Injury.—Apple stock of all ages is attacked by the leaf-folder, the young grafts as well as the 3-year-old trees. The new leaves on the terminal branches of the trees are favorite positions for the leaf-folder to work. The "worm" or larva, folds a single leaf, or ties several small leaves together, and remains inside this hiding place, where it feeds undisturbed. As a result, infested trees present a tied-up and scraggly appearance where the leaf-folders become very numerous. The leaves within which the folder works turn brown as a result of the feeding, and a badly infested block of apple stock may have the appearance of having been swept by fire.

Specific Indications of the Presence of Leaf-folder.—As its name indicates, this insect folds the leaves of the apple. A small tender leaf may be folded longitudinally along the midrib, with the upper surface drawn over, and the whole leaf presenting a flat appearance. Where a young larva folds a comparatively large leaf only a part of the margin is folded over the upper surface and fastened down flat to the

leaf. Frequently several young larvæ will tie up the tender unfolding leaves of the growing tips and work inside the protection thus formed. In such a place the larvæ often bore through the tender leaves, riddling them with small holes. Again, where two large leaves are contiguous the larva may sew them flat together, and live in the hiding place formed between the two.

In June and again in August, in Iowa, the orange-colored moth of the leaf-folder may be seen flying about in the rows of nursery stock. The time when these moths are flying in any numbers is an important one, since this marks the proper time to spray for the second and third broods of the leaf-folders. If the third brood is very numerous the slate-colored moths may be seen among the leaves in the nursery row in October.

The Insect's Appearance.—The leaf-folder itself is a greenish yellow "worm," about half an inch long when it is full grown. It is slightly hairy, but these hairs, or setæ, are hardly noticeable. When the leaf-folder has reached its full growth it changes to the pupa, or resting



FIG. 1. Work of Apple Leaf-Folder. Reduced.

stage, during which it is quite inactive and does not feed. This pupa is about three-tenths of an inch long, brown, with a small knob in front of the head. After a week or ten days in the summer the moth, or adult insect, emerges from the pupa. These moths deposit their eggs, usually on the leaves, from which eggs hatch a new brood of young leaf-folders.

There are two different forms of the moths, an orange colored form, (Fig. 4), which appears in the late spring and in the summer; and a slate-colored form, which appears in the fall. Thus for the first and second brood the orange moth appears, and for the third brood, the slate moth, both being the same species of insect. Such a phenomenon is known as dimorphism, that is, having two forms. Both the orange and the slate forms measure about a third of an inch

long, and a little more than half an inch across the expanded wings.



FIG. 2
Folder on Leaf

The distinguishing characters of the larva are the yellowish head and cervical shield, just back of the head. Most of the other common leaf-rollers which are found on the apple have a brown or a black head. This particular larva is rather small, something over half an inch long when full grown, while the other common apple leaf-rollers measure nearly an inch long when mature. The flat folded leaf will usually distinguish the work of this larva from that of the other leaf-rollers, which roll the leaf in a cylindrical fashion, rather than fold it.

Results of Spraying.—The home-made arsenate of lead was used in practically all the experimental sprayings. When this spray was applied at the proper time excellent results were obtained. The proper time to spray proved to be when the leaf-folders were very young, or when they were still in the egg stage. Spraying after the folders had attained any size was useless, since they were out of reach inside the folded leaves.

In Iowa the leaf-folders appeared three times during the season; the three broods of the year. The first brood appeared as soon as the leaves were out on the trees; the second, about the middle of June; the third, early in August. Since it was found best to spray early in the game the proper times for spraying, for the latitude of Iowa at any rate, would be somewhat earlier. The spraying, then, should be made: First, as soon as the leaves appear; second, the first week in June; third, the first week in August. It is always better to spray early than to spray late. Spraying too late is only throwing away labor and material. In cases of severe infestation it would be wise to make two applications for a single brood, about a week apart.

Where it was very thoroughly applied the single strength arsenate of lead was satisfactory. The one and one-half strength is advised, however, in order to make sure of the matter. The formula for this strength is given in the summary at the end of this article.

Many people prefer to use the prepared arsenate of lead, which has only to be weighed out and placed in the spray tank. Any of the well known commercial brands of arsenate of lead would no doubt be effective for spraying. Of these prepared brands two to three pounds to fifty gallons of water should be used.

The importance of careful spraying cannot be emphasized too strongly. It is almost impossible to do good work with an ordinary nursery sprayer with the nozzles attached to a stationary cross bar. It is much better to have a man walk along behind the spray cart, with a nozzle in each hand, so as to actually cover the foliage with the poison.

Summary. 1. The lesser apple leaf-folder is a small green "worm" which folds the leaves of apple and plum stock in nurseries and young orchards. The leaves are folded over flat, the lower surface of the leaf outside and the fold usually along the midrib. The "worm" itself is green, about half an inch long, and has a pale yellow head.

2. The leaf-folders appear three times during the season: First, as soon as the leaves are out on the trees; second, about the middle of June; third, early in August. The folders remain on the trees from four to six weeks before they become mature.

3. To be effective, spraying must be done when the leaf folders are very young, or when they are still in the egg stage.

The proper times to spray, as determined by the experimental work in Iowa, are as follows: First, as soon as the leaves appear; second, the first week in June; third, the first week in August. These dates are for an average season.

4. The home-made arsenate of lead gave excellent results in spraying for the leaf-folders, applied when the folders were still in the egg stage. The one and one-half strength is advised and is made as follows:

Arsenate of soda . . 6 ounces
Acetate of lead . . 18 ounces
Water 50 gallons.

Dissolve the two chemicals in separate vessels, each in about two quarts of water. The sugar of lead may need to be slightly warmed to make it dissolve. When ready to use pour the two solutions separately into fifty gallons of water, thus forming the arsenate of lead.

5. If a prepared arsenate of lead is used, 2 or 3 pounds of the paste should be taken to 50 gallons of water. Paris green may be used, although the arsenate of lead is considered better. One-third of a pound of Paris green to 50 gallons of water should be sufficient, adding about a pound of lime to prevent burning of the leaves.

[This article will be specially appreciated by the nurserymen of the Mississippi valley who no doubt have already made the acquaintance of this enemy of apple trees in nursery.—ED.]

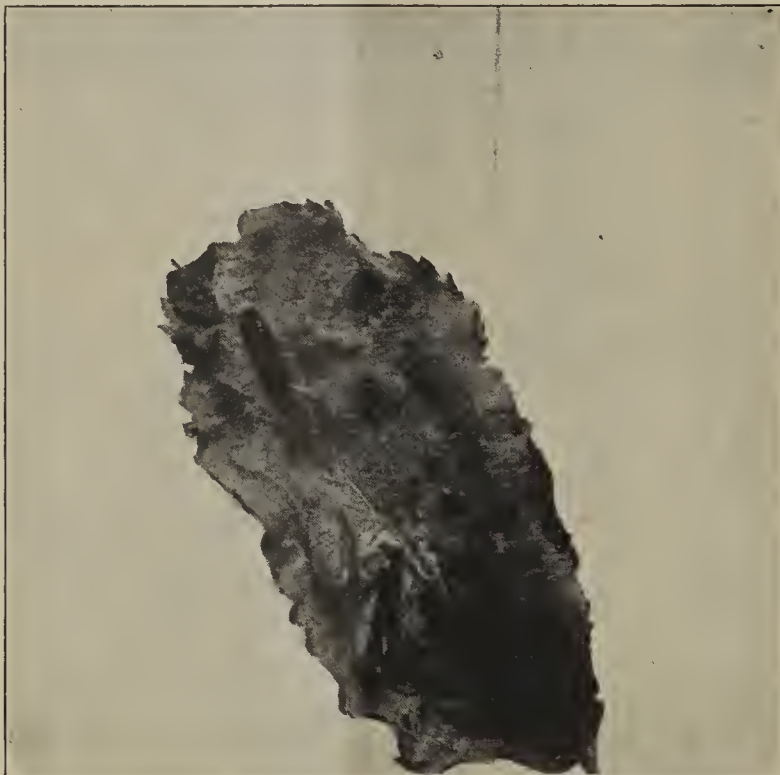


FIG. 3. Pupae and Moth on Leaf. Slightly enlarged.



Fig. 4. Orange form of the Moth. Enlarged.

THE MANUFACTURERS' VIEW POINT

It is the policy of the National Nurseryman to open its columns for the reasonable discussion of questions of interest to plant growers. We are therefore glad to give space to the following statements by manufacturers of spray materials and appliances.

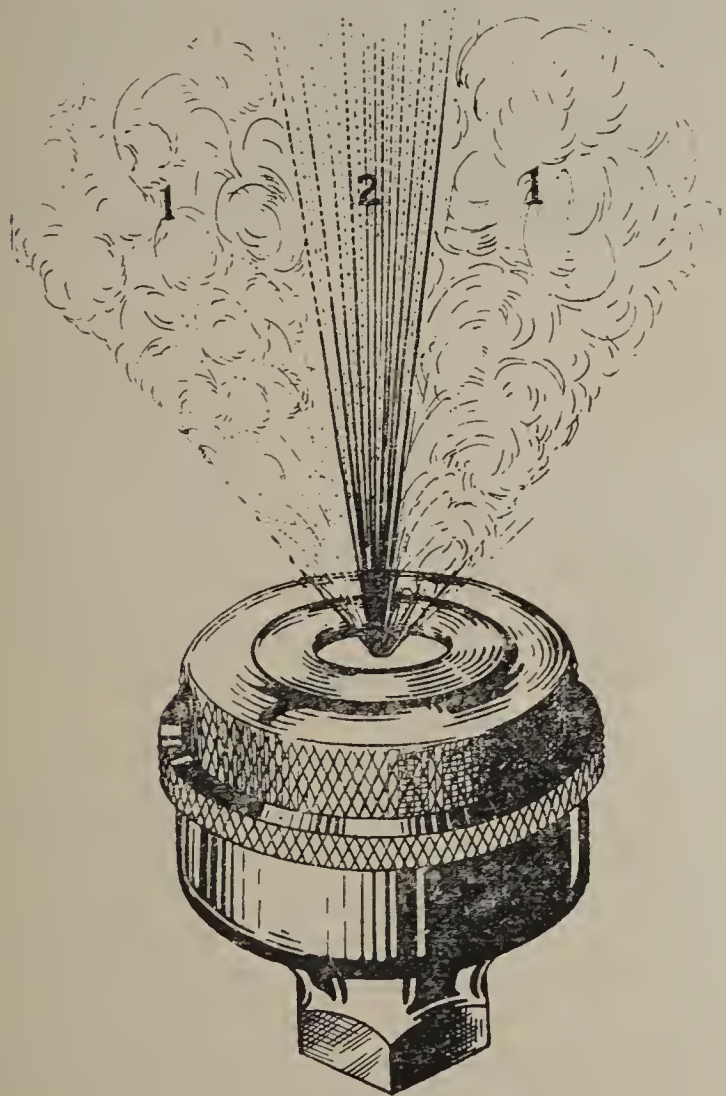
BASIC PRINCIPLES IN SPRAY PUMP MANUFACTURE

N. S. HOBSON OF THE E. C. BROWN CO.

The development of the agricultural interests in every phase brought about by stern competition has necessitated not only the nurseryman, the farmer and the orchardist to closely study the condition of his crops but has also had a far reaching effect on manufacturers of both material and devices for assisting him in his work.

Spraying, which up to quite recent years was almost a minus quantity and its benefits were only realized by the few, has become now an absolute necessity, and the question today is mainly in the selection of first class apparatus and a reliable solution, whether as an insecticide or fungicide.

A machine should develop very high pressure to do the work effectively, and, while fineness of spray is advocated, this fineness should be sought rather through high pressure than from a method of atomizing. The latter, as far as our knowledge goes at present, can only be done under low pressure. (There have been experiments for a machine on these principles but a very objectionable feature was in a loud whistling sound emitted from the nozzles.)



There are tremendous opportunities for a traction power machine because of its many points of general convenience, and a reliable machine of this nature is much sought after by the largest orchardists. The principle of applying solu-

tions by the application of compressed air as a motive power is probably the most practical in vogue at the present time, and even on field crop machines, where the pump is constantly in motion, a large air chamber is always desirable because it ensures a steady pressure and no variation between strokes on the pump.

In operating a traction power machine for orchard work a very large air chamber in which to generate the pressure is necessary, and this air chamber should be well tested and built to withstand high pressure. A common error with many people in discussing this style of machine is in the supposition that where the pressure is decreasing the work is less effective; but it should be borne in mind that the pressure when you start in to do your work is exceptionally high, and as much as three gallons of solution can be delivered without reducing the pressure below 100 or 110 pounds. Therefore, the maximum pressure is very high and the average pressure is equally as high as in a machine where the operation of pumping is constant. Of course, a prime consideration in a traction machine is where the drive can be gotten with absolutely as little loss in transmission to the pump as possible. Every inch of driving ground is very necessary to the good working of these machines, and where there is no lost motion in the drive and no gear to overcome the machine is perfectly practical for the largest work and should be able to thoroughly spray the half of a tree without ever having occasion to skip any.

Next to the machine the nozzle is of almost equal importance, and should be capable of throwing a fine, even spray without any waste, with the possibility of doing damage to the fruit through an overdose of strong chemical solution. With the permission of the Editor we show a small cut of one of our most recent nozzles, the Non Clog Atomizer which in addition to being adjustable to every variety, of spray is also protected from clogging by a removable wire screen which strains all solution. (See sprays 1 and 2 in cut.)

(We are indebted to the Editor for this opportunity to relate our experiences in spraying apparatus through this valuable medium.)

SPLENDID PROGRESS

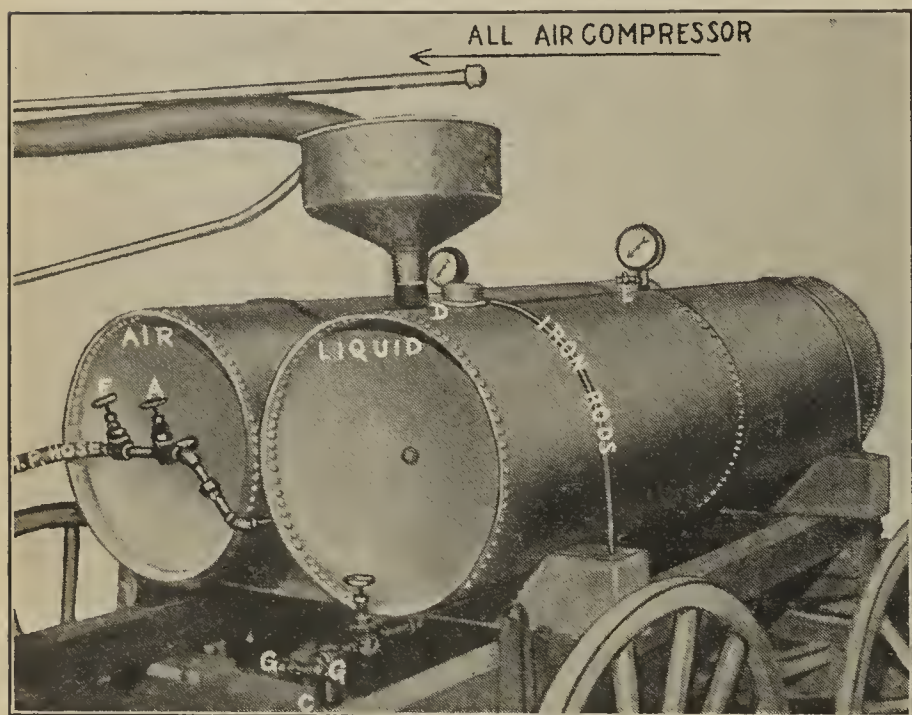
Maloney Brothers & Wells, Dansville, N. Y., have purchased three acres of land of George A. Sweet, fronting Main street and extending back to the D. & M. tracks. We understand that as soon as the frost is out of the ground they will erect a cold storage, one hundred feet square, which will be built of cement blocks. A modern office will also be built facing Main street just below the Readshaw residence. The rapid growth of their business for the last few years has been such that their present accommodations are wholly inadequate.

THE HISTORY OF COMPRESSED AIR SPRAYING IN OHIO

There is situated in old Lake Erie, four miles south of the historic Put-in-Bay, a tract of land containing about 3500 acres which is almost exclusively devoted to peach culture. The fruit raised here is highly colored, of peculiarly delicious flavor, and throughout the country, from Ohio to Connecticut, *Catawba Island*, peaches are in great demand.

In its infancy, peach culture in that section, meant planting the trees, plowing up to them in the fall, and away from them in the spring, cutting out the dead wood, and a few of the unnecessary limbs, and when they reached maturity, coining the luscious fruit into money. There was a time when the grower received \$3.00 and \$3.15 per bushel in the orchard, the purchaser grading and packing them himself. But those days have passed. About 1894 or '95 it was noticed that some of the trees in a couple adjoining orchards looked gray as if fine ashes had been sifted over

compressed air in fifty gallon tanks, mounted on two wheeled carts. He was favorably impressed with this method of spraying as it seemed to meet conditions fully. Returning to the island, he equipped his plant which already contained a boiler, with a steam engine and an air compressor. He then, considering common boiler tanks kept in stock, unsafe to use with such a powerful agent as compressed air confined, arranged with a reliable manufacturer to make special tanks for spraying purposes, that would stand a pressure of 250 lbs. These were made of heavy galvanized steel, and when nearing completion were again dipped inside and outside into the galvanizing solution, thus overcoming any possibility of leakage. To meet local conditions he had larger tanks made, to be mounted on a four-wheeled truck; one set of 130 gallon tanks to be used with a team, and another set of 98 gallon tanks that one horse could pull. A set consisted of two tanks, one for the compressed air and the other for the liquid and connected by the



Cylinders of Compressed Air Sprayer.—Used by W. H. Owen Co., Sandusky, Ohio.

them. Small branches cut from these trees were sent to the experiment station at Wooster, and word was returned that they were thoroughly infected with the San Jose scale. Then came trouble for the orchardists. The state entomologist arrived upon the scene; portions of the orchards were ordered to be cut down and burned, and trees not so badly infected were to be sprayed with kerosene. From that time one thing after another was tried, but with only partial success: whale-oil soap, crude oil, emulsions, until finally the home boiled lime-sulphur wash was applied, and is now used successfully throughout Ottawa Co., Ohio.

After it was generally conceded that the proper remedy had been found, then arose the question of the best methods of application. Some used the fifty gallon barrel sprayers; others the two hundred gallon wooden tanks with a hand pump, requiring three men and plenty of time to run them. But labor was scarce and time meant money. Something must be done. Gasoline engines and other heavy machinery jolting through the orchards got out of order and refused to work. Finally, in 1902, one of the growers went to see an acquaintance in the East who had commenced using



Compressed Air Sprayer in Operation.—W. H. Owen Co., Sandusky, Ohio.

proper valves and piping. They were also fitted up with high pressure gauges, and a separator, which prevented clogging of the nozzles. The liquid tank contained an agitator placed near the bottom and operated by the rush of air through it into tank. The rigs were light and could be used any time of the year with no complicated machinery to get out of order in the orchard, and could be operated by one man using the spraying spar or by two men with two lines of hose and nozzles.

Much interest was manifested by neighboring orchardists in this new method of spraying and when it was proven to be a complete success, other plants sprung up throughout the surrounding territory, and it is now conceded throughout Ottawa Co., that, for the commercial orchardist, compressed air as a power for spraying, covers more of the natural requirements and meets the demand more fully than any medium yet adopted. With it you attain the maximum required power, at the minimum cost for labor.

W. H. OWEN Co.,
L. D. OWEN.

Sandusky, O.

FUNGI FROM THE ECONOMIC STANDPOINT

By B. G. PRATT, of B. G. Pratt Company, Manufacturing Chemists, New York

Few persons realize to what extent fungous troubles are robbing the fruit grower and farmer of the profits of his labor. The potato harvest is cut in half if not protected, and sometimes entirely ruined. The fruit harvested is lacking in size, color and smoothness. Consequently, apples of excellent flavor are sold to the cider mill, while apples that in quality are not fit for the cider mill command fancy prices because of their handsome appearance. Can we get this handsome appearance on Eastern grown fruit? I have no hesitation in answering, "Yes." Experiments made in the East this past summer warrant my saying so.

I had the privilege of attending the National Apple Show at Spokane, Washington, last November, which was undoubtedly the greatest exhibition of beautiful apples that the World has ever seen. I had on exhibition some New York and West Virginia apples, which were equally highly colored as the same varieties grown in Washington and Oregon, just as smooth and perfect, and compared favorably in size. Many people suppose that there are certain climatic conditions in the West that are especially favorable to fruit. This is partly true. Climatic conditions were more favorable in the East thirty years ago than today. The increase in insect and fungous diseases has been discouraging to the most enthusiastic fruit growers, and many have fallen by the wayside. All of the newer fruit sections are freer from these draw-backs, but time will more or less equalize these conditions. The ever increasing demand for quality fruit and vegetables is calling for beauty as well as flavor, and fungous diseases do more than anything else to rob fruit of its lustre and bloom so pleasing to the eye, and for which the public are paying a disproportionately high price.

Fungi, in plain English, represent one of the lowest groups of plant life, and those we have to deal with mostly on fruit and vegetables are parasites (microscopic in size), some of which attack, cuts or wounds such as are made by insects, or bruises from careless handling or packing; yet other forms of fungi will attack healthy plant life, boring their way through the healthy tissues. Heat and moisture are very favorable to their growth and spread, yet some forms are more abundant in cool seasons. It will thus be seen that fungi are of innumerable forms, attacking when and where least expected. This makes it a most dangerous enemy. It is like combatting a contagious disease which we cannot see and know it only by results.

But the grower need not be discouraged, for an immense amount of work has been and is being done along these lines by both our National and State Governments, as well as chemists connected with commercial houses, and the experiments made in this past year have been exceedingly gratifying. You will appreciate the difficulty when you understand that a fungus is one plant growing on another, and a remedy must be found that will kill one without injury to the other. This has been the difficulty with the old Bordeaux mixture, that in killing the fungi, the little plant cells on both leaf and fruit are often injured.

Scientists have long believed that some form of sulphur other than the copper sulphate would destroy fungi without injury to the fruit and vegetables. This past season experiments were made with self-boiled Lime-Sulfur, commercial Lime-Sulfur, iron sulphate, etc., and each experimenter advocates most strongly his own preparation. We believe that the most promising of these preparations was experimented with last year under the name of "Sulfocide," containing actually between 29% and 30% of sulphur in solution, admitting of a great dilution; and in every instance where tried as a substitute for Bordeaux mixture, it has far surpassed it in effectiveness with no injury. Whether it can be used on peach and plum will be a matter of future experiment, but the fact that with less trouble and expense it can be used where Bordeaux has been the only remedy is very encouraging, and makes it worthy of a trial.

"BLACK LEAF" TOBACCO EXTRACT AGAINST APPLE APHIS

Exhaustive experiments with "Black Leaf" Tobacco Extract for spraying purposes have been made by the Colorado Experiment Station, under the supervision of Professor C. P. Gillette, who advises that he has found "Black Leaf" "very satisfactory indeed, both for the destruction of the woolly aphis and the green aphis of the apple tree." He further states: "We also used it against the black peach aphis and the green peach aphis with equally good results. In Delta County, especially in the vicinity of Paonia, 'Black Leaf' was used quite extensively for the destruction of the two apple lice mentioned, and so far as I am able to learn universal satisfaction was given wherever the decoction was used as strong as one part in 75 parts of water. Many are inclined to think that one part in 100 is just as good. In my experiments here I found one part in 75 strong enough to destroy these lice if sufficient force was used in spraying to thoroughly wet their bodies. I do not find that the woolly aphis is any more difficult to kill than other plant lice when the insecticides are applied with sufficient force to wet through the waxy covering."

Professor Gillette further states (in an article in *The Fruit Grower*, St. Joseph, Mo.) that "the orchardists upon the Western slope in Colorado have thoroughly demonstrated that a tobacco preparation known as 'Black Leaf,' used in water in the proportion of about one gallon to 65 or 70 gallons of water, is a very effectual remedy against the plant lice of the orchard when thorough application is made. It has also been thoroughly proven that arsenate of lead is one of the best, if not the best, arsenical poisons for the destruction of the codling moth. As the tobacco preparation is not an emulsion, and as it does not combine in any way with the arsenate of lead or act as an antidote to this poison, these two insecticides may be used together." "The 'Black Leaf' should be in the proportion of about one gallon to 70 gallons of the mixture and the arsenate of lead in the proportion of about one pound to 20 gallons of the mixture. As the arsenate of lead has no power to destroy plant lice, neither has the tobacco preparation any appreciable effect in destroying the codling moth larvæ.

"It will not do to depend upon using a combined spray

at all times, as it will be necessary occasionally to make application for the lice when it will be useless to add the arsenical poison" (and vice versa).

Mr. W. D. Garden, Inspector for the Eastern Division of San Joaquin County, California, reports highly satisfactory results from using "Black Leaf" upon maple trees infested with red aphid, and upon elm trees infested with green aphid, at a dilution of one to 60.

"Black Leaf" is permitted by the U. S. Department of Agriculture to be used in official dipping of sheep and cattle for scab and mange—in which connection, "Black Leaf" is marketed under a positive guarantee to the United States Government, the exact wording on the cans being as follows: "A sample of this product has been submitted to the Department of Agriculture for examination. We guarantee the contents of this package to be of the same composition as the sample submitted to the Department, etc."

"Black Leaf" offers great advantages over home-made "tobacco decoctions" the uniformity being maintained by careful chemical analysis and not by guess work.

THE KENTUCKY TOBACCO PRODUCT CO., INC.,
Louisville, Ky. *Manufacturers.*

VINE HILL NURSERY COMPANY

On Jan. 26th, the Vine Hill Nurseries of Mt. Pleasant, Texas, owned by M. G. Black, was taken over by the Vine Hill Nursery Company which is incorporated under the laws of the State of Texas with capital stock of \$20,000 fully paid. M. G. Black was elected president and general manager, C. O. Lide, vice-president, J. W. Russell, secretary, E. S. Liliernstern, treas.

The new company will be prepared to do a much larger business in the future. This nursery is located one mile north of the thriving little city of Mt. Pleasant, Texas, a town of 5,000 inhabitants. It is in the heart of the Elberta district.

M. G. BLACK, *Pres.*

NEW FRUIT JOURNAL LAUNCHED

"The Intermountain Fruit Journal" will be the name of a monthly fruit paper, to be published in Grand Junction, Col., beginning with the February number. The editor and manager will be Clyde H. Smith, formerly of the *Colorado Fruit Grower* of Grand Junction. While the editorial and business offices of the new paper will be located in Grand Junction the paper will be published in Colorado Springs, and mailed from that city.

Mr. Smith will have entire charge of the paper, and will begin at once a vigorous campaign for subscribers, in the states of Colorado, New Mexico, Utah and Idaho. The paper, for the present, will consist of 24 pages and colored cover, with a special design each month. The February number will be devoted largely to the apple show, and the cover will be a reproduction of the Western fruit jobber's cup, which was won by A. B. Stoddard of Clifton.—*Grand Junction Daily News.*

V FLUIDS AND APTERITE FUMIGANTS

The question of just how to best protect nursery stock and fruit trees from the attacks of the numerous fungous

and scale diseases has been uppermost in our minds for many years.

Progressive growers are taking every advantage of the use of remedial measures to reduce the loss from insects and disease. Various remedies, mostly in crude form and involving considerable trouble in preparation by the orchardist before they can be applied have been generally used. This rough chemistry is a precarious undertaking and often leads to disappointment because the quality and uniformity of the materials used can seldom be tested by the grower. Many are now preaching as the result of actual experiment and observation that the continued use of some at least of these crude remedies exert a destructive action on the cambium, or bark producing cells of the trees.

It goes without saying that the chemist can here be of value. Detecting the need of properly prepared and thoroughly reliable preparations put up in convenient form and ready for immediate application by a simple dilution with water our laboratory staff has worked upon the problem for several years past in different countries and the production of our V₁, V₂ and V₃ Spray Fluids and "Apterite" Soil Fumigant are the result of their labors.

A spray should be effective and non-injurious to the trees easy to mix and apply—free of sediment and not objectionable to the user. These are conditions we have met and while we do not desire to encroach upon the opportunity you have kindly given us of contributing this brief article to your valuable journal, as a matter of common interest to orchardists, nurserymen, florists and others, we make the bold assertion that the many obstacles inseparable from the use of crude materials which it would be unfair for us to enlarge upon here but which are best known to the users, have been entirely overcome in the manufacture of our new preparations, which we venture to predict will in time prove a greater boon to the fruit industry than to ourselves as a commercial undertaking.

ROOT INSECTS

The destructive action of insects is not alone confined to the trees as we see it above the ground, but they also attack the roots, the main stay of the plant. This underground damage is more serious since it goes on undetected—at least until considerable harm has been done. The chief and most commonly met of these underground pests is the woolly root aphid—it punctures and sucks the roots causing serious injury and deformity—thus sapping the vitality and impairing the natural functions of the tree. What is the result? Poor trees, having no vigor—how can they be vigorous, the insects are robbing them of their nutritive juices. For many years the only remedy known was Carbon bi-sulphide which owing to its objectionable odor as well as heavy cost has never come into common use—and being highly inflammable and evaporating rapidly it requires special care in application. After fighting this problem for some time the Soil Fumigant "Apterite" was invented and has been used with considerable success by large fruit growers and nurserymen. It is a powder and can be applied quite readily by mixing with soil.

WILLIAM COOPER & NEPHEWS.

INSPECTOR PERNICIOSUS

The nursery first became afflicted with Inspector perniciosus about ten years ago, soon after the appearance of *Aspidiotus perniciosus*. It is a wingless parasite, which, in attempting to destroy the latter, destroys also the tree or shrub on which the latter subsists. While the names are quite similar there are several points of difference. Of the two, Inspector perniciosus is the more destructive to nursery stock, evidently finding it easier to attack the nursery than the orchard. *Aspidiotus perniciosus* has found the orchard and lawn a paradise where it can colonize unhindered, while in the nursery it is vigorously assailed by the nurserymen with spray, fumes and fire.

There are other marked differences. Inspector perniciosus are of the male, while *aspidiotus perniciosus* are mostly of the female sex. This fact has not tended to the extinction of the former as we might infer, for both have flourished like the green bay tree. That Inspector perniciosus might live and thrive and not be hindered in its attack upon *Aspidiotus perniciosus* and nursery stock, (nursery stock being rather a questionable article anyway), laws were enacted giving it such rights and powers over the property of the nurserymen as were never before granted to any wingless insect. To still further care and provide for this new perniciosus which could not be expected to live on tree-sap and scaly fruit, as the *aspidiotus* does, several thousand dollars are taken each year from tree owners and others by a process called taxation which, after going devious and dubious ways, becomes an appropriation. This appropriation is the propeller for Inspector perniciosus, same as wings are for some insects.

On or before July 1st, each year the nurserymen must send for the Chief Inspector perniciosus asking for assistants to smell out the other perniciosus (*Aspidiotus* by name) on said nurseryman's premises. If the nurseryman grows only strawberry plants or asparagus roots, at which Mrs. *Aspidiotus* would stick up her nose, he must send for Inspector perniciosus just the same. If Mrs. *Aspidiotus* is found roosting in his apple orchard or hiding in his gooseberry patch, the nurseryman cannot sell his strawberry plants or asparagus roots until he destroys his apple trees and gooseberry bushes. Naturally the nurserymen wants to know what Mrs. *Aspidiotus*' presence in the apple tree has to do with selling strawberries and asparagus roots. Mr. Inspector perniciosus simply looks wise and doesn't tell; perhaps he can't. Not long since, the nurseryman was compelled to fumigate said strawberries and asparagus roots, but this requirement made Mr. Inspector perniciosus feel so silly and ridiculous that he abolished this regulation.

Another nurseryman is a grower of all kinds of trees, shrubs, etc. He has fumigated stocks, scions and buds; sprayed sulphur, lime, and fumes, for Mr. Inspector taught him a trick or two before he fell from grace. Mrs. *Aspidiotus* has been confined to her house since last fall and the nurseryman is willing to take his oath that there is not one of her tribe nearer than his neighbor's apple tree.

July and August. Assistant Inspectors perniciosi, A, B and C follow the nursery rows, tree by tree, looking with eagle eye for the *aspidiotus* type. Smash! goes a No. 1, three-quarters inch and up. Perniciosus A has seen a dis-

colored spot where Mrs. *Aspidiotus* had rested awhile. Crack! goes another twenty-five center, as perniciosus B discovers Miss *Aspidiotus* just setting up housekeeping. To be sure he could have brushed her off her perch and saved the tree. Ask him why, and he only looks wise. Snap! goes another fine as silk, five to seven footer. Inspector perniciosus C has found half a dozen fly specks which no nurserymen could see after he is forty, without a glass. Why not spray and kill them? Yes, but smash! crack! snap!'s my job. Shoot your nozzle at the blanks we leave.

The spray flies and so does the scale. Every breeze bears the invisible foe. Time was when the fruit grower said a lot of hard things about the nurserymen for selling scale with their trees. That was before friend Hale told them what a blessing they were getting in disguise. The nurseryman knew no better, but the damage was done and the nurseryman must be punished. Go it! Inspector perniciosus! We don't need you in the orchard any more. Horticulturists can run their own business. What matter if the orchards do infest the nurseries? Didn't the nurseries first infest the orchards? Go it! Inspector perniciosus! Go for the nurseryman!

October comes and so does the tree buyer. So do Assistant Inspectors perniciosi A, B and C. Trees are being dug. Make that fumigating house tight; put your trees in just so; put "umsteen" ounces of water in this crock and add "steen" ounces of acid; drop in this package of cyanide, shut the door, slam! slam! sizzle! sizzle! forty minutes. That kills all the *aspidiotus* that the inspectors Perniciosi overlooked last summer or that may have got on since.

Open up the door; look out! that gas will kill anything, even nurserymen. Wait, Mr. Customer, I must have another look at those trees. You got scale? Sure, everybody has 'em. But you must not have these trees (Crack!) until I look at them. (Snap! Snap!). Scale dead? Dead as a door nail. (Snap! Crack!) These dead scale don't look well. (Snap! Snap!) Hurts the reputation of the nurseryman you know (Crack! Crack! Crack!) These dead scale would drive away trade. (Snap! Snap! Snap!) There, Mr. Customer, you may have what is left. If we have overlooked any scale, you can depend upon it that they are dead. Find any more, throw them out and charge it up to the nurseryman. Smash! Smash! Snap! Snap! Crack! Crack! Sizzle! Sizzle! Sizzle! This's my job. Go it, *Aspidiotus perniciosus*! Go it, Inspector perniciosus! Go for the nurseryman!

W. B. C.

The above highly colored exploitation of the nurseryman's woes due to the presence and function of the nursery inspector, while purposely overdrawn, may not be without its value in calling the attention of the younger and less tactful of the inspecting fraternity to certain essential aspects of the case, as seen from the standpoint of the supposed free and independent plant grower. It is quite possible, and very probable, that in many cases the usefulness of the inspector is so affected by his unfortunate bearing as to almost completely annul any benefits which should accrue from his periodical visitation. A satire of this kind then may not be entirely valueless.—ED.

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Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

PLANS FOR THE DENVER MEETING

Sure information comes to us from St. Louis that a movement is on foot in that region to assemble the Easter delegations en route for Denver in St. Louis, join up the several cars at that point and proceed from thence by special train. The New York and New England delegations could easily make up a car or two at Rochester to be joined by the Ohio members a little later, while the men from the North and those from the South could connect with their Eastern friends in St. Louis itself. The fact that our energetic friend, Frank Webber is promoting this scheme promises well for its success, and further, gives assurance that the convenience and comfort (spelled in various ways) of the devout pilgrims from Rochester and other Northern cities will be thoroughly cared for.

APPLE STOCKS

Much more attention is paid to the matter of adapting the particular variety to the stock best suited to its needs in the old country, than is in vogue in this country.

Apple stocks are imported mainly from France and are grown from the so-called French Crab, which means simply the seedling apple of the country. Small amounts of apple stocks are grown in this country from seed gathered in Vermont and the other New England states. American nurserymen are prejudiced in favor of the European seedlings. This is probably for the reason that the seedlings are grown with rather more care than they are in this country; they are uniformly graded and a given number will make more root grafts than the native stock, though whether they will give better results or not is a question which has never been very accurately answered.

The following are the principal stocks used in propagating the apple and the pear:

1. *Crab and seedling apple.* This represents a group in which probably both crab seed and apple seed are mixed. They are employed in England for the propagation of standard trees, particularly if the tree is a heavy bearer and a weak grower. On the other hand, if it is a strong grower and light bearer the practice is to place it upon a stock which has a restrictive influence upon its growing and a stimulating influence upon its bearing habits.

2. *Doucin or Broad-Leaved Paradise.* This stock has a slightly dwarfing influence on apples, and in the old country is not regarded as a regular dwarf stock. It has a shallow rooting habit, and in this country is quite likely to root-kill.

3. *English Paradise.* This stock is used for most varieties of apples grown under what is termed bush culture in England. It has a distinctly dwarfing effect upon the scion or variety grafted upon it. It develops a thick mass of fibrous roots which separate laterally but do not penetrate the soil deeply. It is, therefore, subject to root killing and is not a safe stock in places where the snow fall is limited.

4. *French Paradise.* This is the smallest type of apple stock used in propagating dwarfs. It is employed in France and England for the purpose of developing trees suitable for miniature bushes, training on trellises, or the so-called Cordon system.

TOP WORKING THE KIEFFER PEAR

Notwithstanding the gibes and ridicule directed at the notorious variety, Kieffer, there are many places in the country where it can be still grown with profit.

In our judgment this is simply an example of the law of adaptation. Those regions to which the variety is not naturally adapted will be eliminated from the contest. Those regions where it is productive and where the climatic conditions are such that its highest qualities are approximated will continue to grow Kieffers for the canning and cheaper consuming trades.

One of the interesting questions to growers who are outside of the Kieffer zone is, what to do with established orchards. In the early history of our experience with this variety the feeling was prevalent that when it became unprofitable it could be easily worked over to varieties which the market would handle. Later experience indicates that the problem is not as easy as it seemed and experience is filtering in from the rank and file of the fruit growers that there are few varieties, especially from the Oriental hybrids, which have a proper affinity for the Kieffer stock.

One of the troubles is that blight seems to be encouraged where the Kieffer is used as a stock. Several instances of this kind are recorded. In the Canadian Niagara district the Anjou has been worked on Kieffer, but in almost every case, if not in every instance, the Anjou has blighted badly. At the recent meeting of the Ontario Fruit Growers Association one orchardist cited his experience in top working sixteen acres of Kieffer with Bosc, with the result that his Bosc blighted so badly as to practically destroy this block of trees. Again, that noted authority, J. R. Cornell of Newburg, goes on record as saying his experience leads him to believe that it is an undesirable and unsafe stock to use. On the whole, therefore, the outlook for the Kieffer as a stock is not promising.

LEGISLATION FOR SPRAYERS

Every farmer, fruit grower and trucker is interested in the bill now before Congress providing for the control of the purity of insecticides and fungicides, so far as they enter interstate commerce by the U. S.

Dept. of Agriculture. The general scope and purpose of this bill have been previously explained in these columns. The measure has the endorsement of all the leading national organizations representing the farmers such as the National Grange, the National Apple Growers' Congress, the National Horticultural Congress, the American Pomological Society, the Association of Economic Entomologists, etc., and also has the hearty endorsement and support of practically all the manufacturers. The use of insecticides and fungicides has increased so rapidly in the last few years that the manufacturers realize that it is of the utmost importance that standards be adopted so that the use of the manufactured products may be on an equitable and scientific basis. It is often impossible for the reputable manufacturer to compete with one who is selling inferior goods at a slightly lower price. This sort of business is injurious both to the legitimate manufacturer and consumer.

The question has been raised whether this sort of control should not devolve upon the states, and whether it would

not be an infringement of the powers of the states for Congress to enact such legislation. An increasingly large proportion of the insecticide and fungicide business, however, is direct from the manufacturer to the consumer, or to a cooperative association of buyers. This business, which is a very large proportion of the whole, in which the manufacturer ships in original packages, or cargoes direct to the consumer is strictly interstate and is beyond the police powers of the state. The control of such interstate commerce is entirely subject to national laws and administration.

There is a very general appreciation of the need of such control due to many a low grade and some evidently fraudulent insecticides and fungicides, so that no further argument for the passage of the measure would seem to be necessary. The measure is one of those many meritorious ones, which come before Congress, whose passage will depend largely upon whether Congress feels that there is any real need or popular demand for it.

We, therefore, urge upon any of our readers who are personally interested in this matter, or who have suffered from the impurity of adulteration of insecticides or fungicides to at once write to Hon. Jas. R. Mann, Chairman of the Committee on Interstate Commerce, Washington, D.C., and to their own congressman, in favor of H. R. 3658. A public hearing will be given the measure on March 8th, and interested parties should let their congressman hear from them before that date.

SOLUBLE OIL OR LIME-SULPHUR

There has probably never been before as much discussion in regard to remedies for fruit-tree pests as there has been during the past few years in regard to remedies for the different Scale Insects, principally the San Jose Scale.

Fruit growers have become accustomed to hearing the Lime-Sulphur man make his claims that Soluble Oil is no good—will kill the tree—and can be used only at an excessive cost.

At the same time, the Soluble Oil manufacturer is to a great extent making the claim that the Lime-Sulphur Wash is a very inefficient remedy, and that with its use the fruit grower can never get rid of the scale. In the writer's opinion, both claims are exaggerations.

Looking at the question from an unbiased standpoint, we find in actual results, about the following: The fruit grower who has an orchard badly infested with scale and sprays thoroughly three or four times the first winter with the Lime-Sulphur Wash—that is, between fall and spring—and possibly two or three times the following year, gets the scale pretty thoroughly cleaned out of his orchard. On the other hand, the fruit grower with a badly infested orchard who gives it one thorough spraying with a properly made Soluble Oil, has accomplished fully as much as the party who has used some four or five sprays of the Lime-Sulphur Wash. This is not theory, but is the actual fact based on results. It should be noted that the writer refers to orchards that are quite badly infested with scale.

The Lime-Sulphur Wash is a combination Fungicide and Insecticide, and Soluble Oil is distinctly a remedy for all scale or Sap-Sucking Insects.

F. G. STREET.

THE PREPARATION AND USE OF CONCENTRATED LIME-SULPHUR

By J. P. STEWART

Experimental Horticulture, State College, Pa.

The spraying part of the horticultural world is just now in a state of transition. This transition involves the breaking away from Bordeaux mixture and the whole list of copper sprays which have served for a quarter of a century as fungicides and the taking up of what may become an equal list of sulphur sprays. It also involves the abandonment of old formulas and processes for making the latter sprays and the substitution of more definite, economical and less disagreeable methods. Just how complete the transition will be can hardly be predicted now. But this much is certain that, whereas two years ago we might easily have told how best to spray a tree today we must wait for further results before this question can be finally answered.

Among these coming sprays, the clear concentrated lime-sulphur solution will undoubtedly occupy a leading place. In the commercial form this solution already has a satisfactory insecticidal record of some seven or eight years. In the new home-preparation, it has an excellent record both as an insecticide and fungicide, being first used by Cordley of the Oregon Station in 1907¹. Realizing the importance of this work, in the latter part of 1908, the writer undertook to determine the essential features of the preparation of storable lime-sulphur solutions and if possible render their use available to orchardists.

In brief, the results of this study are as follows: In the making of a storable lime-sulphur at home, we must first get the formula right. This is accomplished by using one pound of good lime², two pounds of sulphur, and one gallon or a little more of water, boiling it all down so as to have about one gallon of total product at the close. This 1-2-1 formula can be made up in any quantity, merely noting that the pounds of lime and the gallons of final product are the same in number, while the pounds of sulphur are just twice as many.

The kind of sulphur may be either flour, flowers, or "powdered commercial" at least 99½% pure. The last named is probably most desirable, with the flour next, on account of cheapness and the somewhat lessened tendency to form pellets in the process of mixing.

The utensils needed are a cooker, measuring stick, strainer and hydrometer. Their total cost need not exceed \$15. They are described in detail in our Bulletin 92¹, so that it will suffice here to say that the cooker may be of either iron or wood and use either bottom heat or steam. If steam is used it is preferable for accurate work that it be in closed coils, rather than live steam, at least in the latter stages of the process. This is merely because it is desirable that the final volume be under control and be decreasing rather than increasing. Steam jacketed kettles with mechanical agita-

tors are available and they work very nicely, indeed. But where storage is not considered and lower densities are permissible, there is no objection to making the material with the use of live steam throughout.

DETAILS OF PREPARATION

In making fifty gallons of concentrate the procedure is as follows:

[Penn. Expt. Sta. Bul. 92, July, 1909. This bulletin contains full practical directions for making, preserving and diluting lime-sulphur solutions, together with a table of uses. It may be obtained for the asking by writing the Experiment Station, State College, Pa. Materials:

50 lb. best stone lime (not over 10% impurities).

100 lb. sulphur (kind stated above).

50-55 gallons of total product, at finish.

Put 10 gallons of water in kettle and start fire. Place lime in kettle. After slaking is well started, add the dry sulphur and mix thoroughly, adding enough water to maintain a thin paste, which requires about five gallons. After the slaking and mixing are completed, add water to the height of 50 gallons on the measuring stick and bring to a boil and stir until the sulphury scum practically disappears. Then add water (preferably, but not necessarily, hot) to the 60-gallon² height and boil again to 50 gallons, if storage space is limited. If it is not limited, a little more water may be added the third time and boiling stopped at about 55 gallons. The material should be kept well stirred, especially during the early stages of the process, and any lumps of sulphur or lime should be thoroughly broken up.

The time of boiling should be until the sulphur granules are evidently dissolved. This fact is best determined by dipping and slowly pouring some of the material, under close observation. In many cases we have obtained as complete dissolving of the sulphur in less than forty minutes of actual boiling as was obtained by any time up to two and a half hours. In general a period of forty to sixty minutes of actual boiling should be safe and sufficient to put the sulphur into solution. But the amount of sulfites and sulfates and therefore the sediment, are undoubtedly increased by unduly prolonged boiling. Hence, the amount of water added in the third addition should be so regulated as to permit the necessary boiling and just reach the desired volume at the close. This gives the least sediment and the regulation can be easily accomplished after a few trials.

The finished product may be immediately poured, or strained into a barrel, or settling tank. The straining is merely a safeguard to prevent possible clogging due to imperfect materials, or failure to break lumps in the sulphur. When properly made, the amount of sediment left in the strainer is insignificant. To avoid any considerable loss of materials, it may be washed with part of the water used in making the next lot, simply pouring the water through the strainer into the kettle, and any lumps of sulphur discovered may be broken up and used again.

The sediment is of apparently no value as a spray material against insects,² hence its volume and removal, especially in the commercial preparations, become matters of importance. It is composed largely of sulfites and sulfates of calcium, together with

¹An account of his work appeared in the *Rural New Yorker* of March 1908 but without any statement of method of preparation. This appeared in "Better Fruit" in April 1909.

²One containing 90 to 95 per cent calcium oxid and as little magnesium as possible.

¹If cooker is large enough, the whole amount of water may be added immediately after mixing in the sulphur, thus avoiding the check in boiling though greater care is required to prevent boiling over. A 75 gal. cooker is large enough for this.

²As indicated by the work of Parrott at the Geneva New York Station.

the magnesium, iron, aluminum and other insoluble impurities in the lime and sulphur used. Its volume is affected chiefly by: the ratio of lime and sulphur; the purity of materials; and the time of boiling. Its relative volume also naturally increases with the density of the product. Made as described above its actual volume apparently runs from 5% to 9% of the total product.

In the home preparation, the difficulty of its economic removal and its fineness and apparent lack of objectionable mechanical qualities, except in displacing valuable materials, have led us to disregard it. If desired, however, it may be removed by letting the product settle for about a day, drawing off the clear portion and straining the remainder through a moderately fine cloth inside the strainer. The sludge may then be washed free of any further valuable materials in the manner stated above.

THE PRESERVATION OF LIME-SULPHUR

If properly handled, lime-sulphur preparations apparently can be preserved indefinitely. Ordinary changes in temperature have little effect on them. But they are very sensitive to a number of other influences. Continued exposure to air, for example, results in the development of a crust of solids of varying thickness. This is prevented by cutting off the exposure to air, either by an oil covering or by immediate storage in tight closed vessels, filling them completely. When the crust does develop it can be skimmed off with a fine screen and readily redissolved by heating either in water or in the concentrate itself.

These solutions are also decomposed by a number of other things. Acids, carbon dioxide, certain arsenicals, and even extra lime put in as a marker, all appear more or less rapidly to break down the lime-sulphur combination. This is by no means always fatal in practical results, but we believe it is to be avoided when possible. Most of them can be avoided by elimination.

In the case of arsenicals, however, their addition is necessary, if the material is to be used as a summer fungicide. The addition of arsenate of lead results in very rapid decomposition, both of itself and the lime-sulphur. The resulting compounds seem to give good results practically, however, so that we cannot entirely condemn the

process just at present. But it seems to be a very wasteful process, especially when we can obtain the same poisoning power in another arsenical, the arsenite of lime, for about one-sixth the cost. The latter arsenical also is practically stable in the lime-sulphur solution. It has been in use to a greater or less extent for a long time in connection with other fungicides, but has been limited by a tendency to burn foliage. This is practically avoided by making it up with a slight modification of the Kedzie formula, the method being described in the above mentioned bulletin of the Pennsylvania Station. The use of Paris green in this solution, we believe to be undesirable, with nothing to commend it.

THE PROCESS OF DILUTION

In the application of any concentrate, either home-made or commercial, it is essential that a definite method of dilution be followed. Two solutions may look exactly alike and yet differ widely in density, so that any accurate method must be based primarily on the density of the concentrate that is being diluted. Moreover, we believe that recommendations based on the density of diluted spray are preferable to those based on the number of dilutions even when accompanied by a statement of the concentrate's density.

Accurate dilution is very simple and easily accomplished with the aid of a hydrometer having the specific gravity scale¹. Sprays of any desired density may be obtained from any concentrate by simply getting the reading of the concentrate and dividing the decimal of this reading by the decimal of the spray desired. For example, if the reading of the concentrate is 1.27 (about 31 Baume), to get a spray of 1.03 density we divide the .27 by .03 and obtain nine, which is the number of dilutions required, and which of course is obtained by adding *eight* volumes of water. In this we are simply applying the general fact that the densities of solutions heavier than water vary inversely with the number of dilutions.

The workings of the process may be seen further in the following:

(a) To determine number of dilutions.

$$\text{Formula: } \frac{\text{Decimal of concentrate}}{\text{Decimal of Spray Desired}} = \text{No. of dilutions}$$

Times and Strengths of Spray for Various Purposes

INSECT OR DISEASE	SPRAYING TIMES	
San Jose Scale, Oyster-shell Scale,	Trees dormant, but best in fall or spring. At hatching time.	1.03 for regular annual control. 1.04 in bad cases, especially on old apple trees, 1.02,
Blister-mite, Plant lice, Peach leaf curl,	Just before buds open.	1.03,
Apple and pear scab, Apple worm, add arsenical in 2 and 3	(1) Blossoms beginning to show pink. (2) Within a week after petals fall, (3) About three weeks later.	1.01, may be varied by .002 or more either way as results direct.
Cherry leaf spot,	Three sprayings, a month apart, beginning with signs of infection.	1.01, or slightly weaker.
Peach scab and brown rot of stone fruits (Experimental as yet.)	(1) Three or four weeks after petals fall, (2) Half-way between (1) and (3). (3) Two weeks before fruit ripens.	1.003 to 1.005, may be varied .001 either way, as results direct. On peaches and plums, limited trials only, testing effect on foliage by applying to a few trees several days before regular applications.

¹The presence of foreign soluble materials or of much roily sediment in the sample will vitiate the test, a fact which must be taken into consideration the former especially in solutions of unknown preparation."

¹Such an instrument, fitted with the Baume scale also, may be obtained from Bausch & Lomb, Rochester, N. Y., or from the firms mentioned in our Bulletin 92.

Examples: $\frac{1.24}{1.03} = 8$, or $\frac{1.25}{1.01} = 25$
 $\frac{1.30}{1.03} = 10$, or $\frac{1.30}{1.005} = 60$.

(b) To determine the density of spray used:

Formula: $\frac{\text{Decimal of concentrate}}{\text{No. of Dilutions}} = \text{Decimal of Spray}$.

Examples: $\frac{1.26}{10} = .026$, ... Spray = 1.026
 $\frac{1.27}{50} = .0054$, ... Spray = 1.0054

This method gives final sprays of definite density and the importance of this is obvious when we consider the relatively small margins between safe and unsafe densities in the use of these solutions on foliage.

With Baume hydrometers, the dilutions are obtained indirectly either by conversion into the Specific Gravity scale or by means of a special dilution table. In the latter case, however, a table is likely to be needed for each density of spray desired.

The foregoing table gives the uses of the lime-sulphur spray, as far as our present knowledge extends:

TIMES AND STRENGTHS OF SPRAY FOR VARIOUS PURPOSES

While it is believed that the densities recommended in this table will generally prove efficient and safe where pure solutions are used,¹ yet occasional injury has occurred from third and fourth applications when the earlier applications of the same strength of spray had proved entirely safe. Also the abundance of the application, may frequently affect the amount of foliage-injury nearly as much as the density of spray applied.

ADVANTAGES OF HOME-MADE CONCENTRATE

As compared with our other leading sprays the advantages of the storable, home-made lime-sulphur are conspicuous. In total cost, including the making, it will produce a 1.03 scale spray for about three-fourths of a cent or less per gallon, while the commercial preparations usually cost two cents or more. The known absence of superfluous and possibly harmful ingredients is also of some importance. For apple scab, it does not "russet" the fruit; it can be made up before hand; and in proper strengths costs about one-quarter cent per gallon. Bordeaux (4-4-50), on the other hand, russets fruit; is not storable; and costs about one-half cent per gallon.

TENNESSEE HORTICULTURAL SOCIETY AND NURSERYMEN MEET

DEAR MR. EDITOR:

The Tennessee State Horticulture Society held their meeting, Wednesday, Jan. 26; the Nurserymen held theirs Jan. 27, at Nashville, Tenn., the two societies holding joint meetings. There was the largest attendance that they have ever had and next year it will be necessary to find new quarters. The fruit growers of Tennessee are just realizing the Horticultural possibilities of their state. Everyone was enthusiastic, anxious to learn and willing to tell his own experiences. There is no distinct line drawn between the orchardist and nurseryman, each taking part in the discussion of both meetings. The interests of both are the same, and in the meetings they were closely related.

¹The presence of salt in some of the commercial preparations, as indicated in the work at Geneva, N. Y., makes caution desirable in using them upon foliage.

Prof. Keffer, secretary of the Horticulture Society, Prof. Bentley, secretary of the Nurserymen's Association and Prof. Vorhees, local forecaster of Knoxville, take active part in the meetings and have done a good work for the advancement of Horticulture in Tennessee.

Yours truly,

W. H. STARK.

SPRAYING TO DESTROY SAN JOSE SCALE IN CONNECTICUT

DR. W. E. BRITTON, New Haven, Conn.

Another year's work in spraying to destroy San Jose scale in Connecticut shows a tendency toward the use of the lime-sulphur mixtures rather than the oil preparations. In the large peach orchards of the state the owners who formerly sprayed with lime-sulphur found it such a good fungicide in addition to its properties as a scale killer that they have never seen any need to change. Others are now returning to it.

Many are also using oil preparations, which seem to be especially desirable for spraying old apple trees with rough bark, as they will undoubtedly penetrate and reach into cracks and crevices better than lime and sulphur. This is particularly true of badly infested trees, where it is desirable to clean them up as soon as possible. The twigs or new growth of the apple are somewhat pubescent, and can be covered better by the oil than by the lime and sulphur. With badly infested trees it is often advisable to spray twice, once in the fall and again in the spring, using oil for the first treatment and lime-sulphur for the second.

There is no reason why lime and sulphur should not be used in the fall, except that better results will probably be obtained by a treatment with each, than by two treatments with the same mixture, and more benefit will be derived from the lime-sulphur as a fungicide if applied in the spring; also the scales will be less liable to set on the bark if coated with lime and sulphur through the summer. The fall treatment should be given early—just as soon as the leaves are off the trees—because the scale keeps breeding until about December 1st in Connecticut, and undoubtedly a larger proportion of the scales can be killed by any spray applied say, about the middle of November, than a month later, after the scales have reached their winter condition.

Several nurserymen have reported excellent results in spraying their growing nursery trees and their bedded stocks with the lime-sulphur mixture.

The commercial lime-sulphur mixtures on the market seem to give satisfactory results on dormant trees, especially if used somewhat stronger than recommended. The oil preparations also will be more successful in destroying the scale if used in the proportion of about one part to twelve parts of water.

THE MEETING OF THE ASSOCIATION OF HORTICULTURAL INSPECTORS II.

The meeting was held in the Copley Square Hotel, Boston, December 27th and 28th, 1909.

Among those present were: F. L. Washburn, St. Anthony Park, Minn.; J. B. Smith, New Brunswick, N. J.; H. E. Summers, Ames, Iowa; G. G. Atwood, Albany, N. Y.; Franklin Sherman, Jr., Raleigh, N. C.; N. E. Shaw, Columbus, Ohio; H. A. Surface, Harrisburg, Pa.; E. B. Engle, Harrisburg, Pa.; J. L. Phillips, Blacksburg,

Va.; E. L. Worsham, Atlanta, Ga.; P. J. Williams, Auburn, Ala.; L. R. Taft, East Lansing, Mich.; S. A. Forbes, Urbana, Ill.; A. E. Stene, Kingston, R. I.; J. E. Stewart, Morgantown, W. Va.; W. E. Rumsey, Morgantown, W. Va.; C. P. Gillette, Fort Collins, Colo.; T. J. Headlee, Manhattan, Kan.; L. M. Peairs, College Park, Md.; E. D. Sanderson, Durham, N. H.; T. J. Hunter, Lawrence, Kan.; E. F. Hitchings, Augusta, Me.; W. A. Thomas, Clemson College, S. C.; W. E. Britton, New Haven, Conn.; J. Hulsted, Albany, N. Y.

The American Association of Nurserymen was represented by Messrs. William Pitkin and Irving Rouse of Rochester, N. Y.

RESOLUTIONS

The following resolution presented by one of the members was endorsed by the Association:

Resolved—That no certificate should be used on nursery stock that is deformed by Woolly aphis or diseased with Crown Gall.

The committee on National Legislation reported a proposed bill which had been agreed upon at a conference with the representatives of the Nurserymen's Association and the chairman and some members of the committee appointed by the American Pomological Society to consider the matter.

The principles of the bill were endorsed by the association and it was carried that the President appoint a committee to make such changes as may seem necessary; the committee to confer with the committees of American Nurserymen's Association and American Pomological Society respectively and make every effort to have the same passed by Congress. The President appointed Messrs. T. B. Symons, E. L. Worsham and G. G. Atwood.

Many interesting papers were presented at the meeting and the discussions of the many timely questions on the program were vigorous and instructive.

Prof. G. G. Atwood of New York read an interesting paper on the Brown Tail Moth on Imported Nursery Stock. Prof. Atwood gave in detail his experience during the year in the inspection of all imported trees and plants sent to New York State, to prevent the establishment of the brown tail moth, whose nests were found on imported stock from Europe.

While New York State shows the largest number of imported shipments and also the finding of an enormous number of brown tail moth nests, yet the officers of nearly all of the states found the brown tail nests to a greater or less extent. Notwithstanding the whole sale importations all of the inspectors present reported that they were successful in preventing the escape of the moth into their respective state. The inspectors expressed their appreciation to Mr. Atwood for first calling their attention to imported shipments and the notification of other shipments throughout the season.

Dr. L. O. Howard, of Washington, gave an informal address on his trip to Europe this past summer, citing the conditions that prevailed as regards the occurrence of the brown tail moth. He stated that some European certificates were satisfactory, while others could not be relied upon.

Prof. T. B. Symons presented a paper entitled "Local Inspection; Public Sprayers and the Osage Orange Hedge." He showed the advantage of a system of Local Inspectors to inspect the orchards in each county of the state. He thought the personal contact method of dispensing information was the best means of reaching all the growers. Success had attended the operations of public sprayers in Maryland; twenty-five having been operated by the State Department during the past year.

He condemned the Osage Orange hedge as a nuisance to any farm aside from the fact that it is an abundant breeder of San Jose scale in many Eastern and western states. He urged a united campaign in the destruction of this hedge throughout the states where it exists.

The election of officers resulted in the re-election of Prof. F. L. Washburn, of Minnesota, president, and Prof. T. B. Symons, of Maryland, secretary.

IMPORTS OF NURSERY STOCK INTO ONTARIO

A great quantity of nursery stock is imported into Ontario every year, and these imports are on the increase. The value of the stock

imported through Windsor and Niagara Falls in 1904 was \$12,724.50 in 1908, the amount imported through Niagara Falls alone was \$20,497.00, showing an increase of \$8,772.50 over the aggregate of the two points in 1904. Says the "Report of Fruit Branch, Department of Agriculture, Ontario, 1908," A great deal of this stock are seedlings for grafting and budding.

The total amount of nursery stock growing in Ontario is approximately as follows: Conifers, 557,000; deciduous ornamental trees, 534,500; apples, 1,924,500; pears, 215,450; cherries, 279,900; plums 268,100; peaches, 409,100; grapes, 115,700; about 75 acres of small fruits and 50 acres of ornamental shrubs.

HOME MANUFACTURER OF LIME AND SULPHUR A CANADIAN METHOD

The following is a description of a small lime and sulphur plant in which direct heat is utilized:

Two boxes 18 inches high, 4 feet 6 inches long; 2 feet, 9 inches wide, using 1½ inch lumber. No. 16 iron plating is used for the bottom, 6 feet x 3 feet. This extra size allows the iron to be rivetted on the sides and in this way acts as a protection. These boxes cost \$5.00 each.

The structure for holding the boxes may be made of brick or cement. The one shown is made of brick. It is made in two steps in order to allow the hot water to run from one box to the other. A fine grate which costs \$2.00 is placed under the first box which is used to boil the wash, the heat striking this passes onward to the second, and upper tank which is used to boil water.

Cost of plant:

2 boxes as per description, \$5.00 each	\$10.00
1 grate	2.00
Cost of building walls and finishing plant	13.00
	<hr/>
	\$25.00

Mr. J. H. Broderick, St. Catharines, the owner of this plant, writes as follows: "In making a batch of this lime-sulphur wash, I use 25 gals. of water, when boiling add 48 lbs. of lime, and as soon as lime begins to slack well and the water boils freely, add 34 lbs. sulphur in paste form. Boil for an hour and add enough water from upper tank to make 80 gallons.

Cost of manufacturing 80 gals. of lime and sulphur wash with formula of 22 lime, 17 sulphur, 40 water:

Sulphur, 17 lbs. at \$1.42	\$24.14
Lime, 22 lbs. at 25 cents bushel	7.85
Coal for fuel, 10 lbs. at \$4.50 per ton	2.25
Labor	10.00
	<hr/>
	\$44.24

In boiling this mixture, Mr. Broderick has only used the ordinary strength, but by doubling the solution a formula of concentrated solution could be made which when diluted from the upper tank would make 160 gallons of mixture which would lessen the cost of production about 5 cents per barrel of mixture, and if the lower box was found to be too shallow to allow the violent action of boiling, it could be made 22 inches deep, an increase of depth of four inches which would cost only a trifling amount.

This type of plant is a very economical one and gives excellent results. It should be located as near to the water supply as possible. The only drawback is that the mixture has to be baled out to the spraying tank. However, in some locations having a natural elevation of land this could easily be remedied. This drawback is not serious enough to detract from the value and suitability of such a plant to the majority of fruit growers.

The formula used for the lime and sulphur has changed a good deal. Three years ago the most used formula was 17 lbs. sulphur, 34 lime and 40 gals. water, but year before last and last year, the tendency was to equalize the amounts of lime and sulphur and the prevailing formula was 18 sulphur, 22 lbs. lime, 40 gals. water. The quality of the mixture has greatly improved and a more uniform wash has been used with more satisfactory results. The lime and sulphur has been very effective on San Jose scale and Peach curl.

LIME-SULPHUR PREPARATIONS FOR THE SUMMER SPRAYING OF ORCHARDS

By W. M. SCOTT, U. S. Department of Agriculture

Because of the injurious effect of Bordeaux mixture on both the peach and the apple, there has been in recent years great activity in the development of new fungicides. Preparations containing sulphur as the active principle have taken the lead and it appears now that Bordeaux mixture will be largely supplanted by lime-sulphur preparations in the summer treatment of apple and peach diseases.

SELF-BOILED LIME-SULPHUR FOR PEACH DISEASES

The self-boiled lime-sulphur mixture has passed through three years of experimentation and its efficiency as a fungicide for the control of certain peach diseases has been well established. During the past season the writer, assisted by Mr. T. W. Ayres, conducted experiments in the Hale orchard at Fort Valley, Georgia, the result of which demonstrated beyond doubt the practicability of controlling peach scab and brown-rot with this mixture. On a block of 568 Waddell trees the yield of good fruit was increased 100% by two applications of the self-boiled lime-sulphur mixture, as compared with the yield from unsprayed trees in the same orchard.

In order to prevent the curculio from puncturing the skin of the fruit and thus opening the way for brown-rot infections we sprayed a block of 1100 Elberta trees with the self-boiled lime-sulphur and arsenate of lead combined. Four applications were made, the first two of which contained the arsenate of lead at the rate of 2 lbs. to each 50 gallons of the mixture. No injury whatever resulted from the treatment and the sprayed block yielded ten times as much good fruit as the adjacent unsprayed block of the same number of trees. Of the sprayed fruit only 4½% was affected with brown-rot and 6½% with scab. The fruit from the unsprayed trees was 63% rotten and 99% scabby. On the New York market the sprayed fruit from the lime-sulphur arsenate of lead block sold for 50c a crate more than that from the unsprayed block.

Another orchard of 15,000 peach trees, located in West Virginia, was sprayed with self-boiled lime-sulphur under the writer's directions. As very little brown-rot occurs in that section the treatment was directed against the scab disease alone. A small block of Elberta trees was left unsprayed and all of the fruit from this block was affected with scab and 86% of it so badly affected as to be unmerchantable. On the other hand none of the fruit from a block of Elbertas sprayed twice was badly affected and only 15% showed any trace of the disease.

The results cited above are convincing and it appears that there is no longer room for doubt that peach scab (*Cladosporium*) and brown-rot can be controlled by spraying with self-boiled lime-sulphur. The courses of treatment to be followed under most of the conditions existing in the East are as follows:

Scab Treatment.—For the treatment of peach scab alone where brown-rot does not occur, spray the trees with 8-8-50 self-boiled lime-sulphur about one month after the petals fall and again three to four weeks later. In mild cases one treatment thoroughly applied about a month after the petals drop will so nearly control the disease that a second application may not be necessary. However, two treatments will usually be required, especially on late maturing varieties.

Brown Rot and Scab Treatment.—In orchards where both brown-rot and scab are to be combated, the following is the course of treatment required:

Spray with 8-8-50 self-boiled lime-sulphur (1) three to four weeks after the petals fall (2) about three weeks later, and (3) about one month before the fruit is expected to ripen. This applies especially to the Elberta, Belle and other mid-season varieties. The season being shorter with earlier maturing varieties such as Waddell and Carman, only two applications, the first and the third of the above outline, will be required.

Combined Scab, Brown-rot and Curculio Treatment.—Where the curculio occurs in injurious numbers it is necessary to control it in order to obtain the best results from the brown-rot treatment. Arsenate of lead should be used for the purpose and the treatment would then be as follows:

1. About the time the calyces are shedding, shortly after the petals drop, spray with arsenate of lead at the rate of 2 lbs. to 50 gallons of water.

2. Two to three weeks later, or about one month after the petals drop, spray with 8-8-50 self-boiled lime-sulphur and 2 lbs. of arsenate of lead.

3. About one month before the fruit ripens spray with 8-8-50 self-boiled lime-sulphur, omitting the poison.

An account of the experiments referred to above and full directions for spraying peach orchards will be issued at an early date as Bulletin No. 174 of the Bureau of Plant Industry.

LIME-SULPHUR SOLUTION FOR APPLE DISEASES

In recent years Bordeaux mixture has proved to be objectionable as a spray for the control of apple diseases on account of the russetting of the fruit and the burning of the foliage caused by it. During the past three years experiments with lime-sulphur preparations in the summer spraying of apples have been conducted by several of the experiment stations and by the Bureau of Plant Industry. The results have been fairly uniform, indicating that a lime-sulphur preparation in one form or another is destined to largely take the place of Bordeaux mixture in spraying the apple orchard.

A lime-sulphur solution containing, when diluted, about 4 lbs. of sulphur to 50 gallons of water appears at present to

be the most promising preparation. This may be obtained by using the commercial solution at the rate of $1\frac{1}{2}$ gallons to 50 gallons of water, or by boiling the mixture at home and diluting it so that each 50 gallons will contain 4 lbs. of sulphur. At this strength neither the commercial nor the home-boiled solution materially injured apple foliage in the experiments which we conducted last year. If the results of these experiments could be taken as a reliable guide there need be no hesitancy in using this mixture, but under different conditions the results might be different and the matter must still be considered as more or less experimental. In our experiments the commercial solution at a strength of 2 gallons to 50 gallons of water injured apple foliage rather seriously and it should not be used stronger than $1\frac{1}{2}$ to 50.

Our experiments of 1908 and 1909, as well as the published records of other investigators, show that the lime-sulphur solution is apparently as effective as Bordeaux mixture in the control of apple scab. In experiments which we conducted in Virginia the disease was held down to less than 1% of the crop by three sprayings with the lime-sulphur solution (2 to 50), while 30% of the unsprayed fruit was scabby. In Michigan, four applications of the same solution held the scab down to about 5% of the crop while 81% of the unsprayed fruit was scabby. It will control the apple leaf-spot and other minor troubles as well as apple scab, but so far it has not proved to be a satisfactory remedy for apple blotch (*Phyllosticta*) and bitter rot. In sections where spraying for bitter rot is required, the lime-sulphur treatment for scab and leaf-spot could be followed by applications of Bordeaux for bitter rot.

The results of experiments so far indicate that arsenate of lead is the poison to use with the lime-sulphur preparations. Instead of increasing the caustic properties of the mixture, as at first feared, it apparently has the opposite effect to some extent and does not lose any of its insecticidal value by reason of the combination. In all of our experiments last year the combination of Paris green and the lime-sulphur solution proved to be quite injurious to apple foliage as did also the combination of arsenite of lime and lime-sulphur.

ARSENICALS IN LIME-SULPHUR MIXTURES

From the Popular Edition of Bulletins Nos. 319 and 320 of the New York Agricultural Experiment Station, Geneva, N. Y., by L. L. Van Slyke and P. J. Parrott.

The advisability of combining arsenicals with sulphur sprays has not yet been conclusively determined; but present studies indicate that such poisons may be combined with lime-sulphur solutions. In spraying for blister-mite, arsenate of lead, or arsenite of lime in the usual quantities may be combined to advantage with the lime-sulphur wash for the purpose of controlling budmoth and case-bearers, which are now quite destructive in many orchards. In preparing the arsenite of lime, two pounds each of white arsenic and salsoda crystals are boiled until dissolved, about 15 minutes, in a gallon to a gallon and a half of water. Use the solution to slake three or four pounds of good stone lime and when ready for use add water to make two gallons and stir thoroughly. A quart of the mixture will then contain one-fourth pound of the combined white arsenic, in form of the safe arsenite of lime, and be equal to a half pound of paris green.

BEGIN TO PLAN FOR THE ANNUAL MEETING

Note the preliminary program outlined in the April number of the NATIONAL NURSERYMAN.

Catalogues Received

Pocket Manual of Plant Diseases from James Good, Manufacturer of Whale Oil and Disinfecting Soaps, 939 N. Front St., Philadelphia, Pa.

1910 Price List of Berry Fruit Plants, etc., from L. J. Farmer, Pulaski, N. Y.

Descriptive Catalogue from The Yokohama Nursery Co., Ltd., 21 Naka-ura, Yokohama, Japan, of Flowering and Ornamental Trees, Shrubs, Bulbs, Herbs, Climbers, Fruit Trees, etc. Beautifully illustrated.

Annual Catalogue for 1910 of High Class Seeds from J. M. Thorburn & Co., 33 Barclay St., New York City. Illust.

Catalog and price list of Pecan Trees, grafted and budded, for 1910 from the Stuart Pecan Co., Nurserymen, Ocean Springs, Miss., and Beaumont, Texas.

Folder from the Arrowfield Nurseries, Wm. N. Roper, Manager, Petersburg, Va., on Pecan Trees for Northern Planting.

Price List of Strawberry Plants from Louis Hubach, Judsonia, Arkansas.

Peter Schott, Knittelsheim, Rheinpfalz, Germany. Price List of Forest Seeds and Forest Trees for 1909-1910. Agent for the British Isles, Mr. B. Bradley, The Rookery, Meriden, Nr. Coventry.

Calendar of the Seasons, from the Biltmore Nursery, Biltmore, N. C.

Spring, 1910, Bulletin No. 1 from the Chase Nursery Co., Huntsville, Ala., of Grade Count Surplus Transplanting Stock, Imported Stocks, Seedlings and Nursery Supplies.

Price List of Fruit Trees, Fruit Plants, Ornamentals, etc., from Holsinger Bros., Rosedale, Kans.

1910 Catalogue of Strawberry Plants, Kenridge Fruit Farm, J. E. Kuhns, prop., Cliffwood, N. J.

Folder from Glen Brothers, Rochester, N. Y., on Sober Paragon Chestnut Trees.

Annual Illustrated Catalog of the Royal Palm Nurseries, Reasoner Bros., Oneco, Fla., for 1910.

General Illustrated Catalogue of Flower and Vegetable Seeds, etc., for 1910, from Chr. Lorenz, Seed Grower and Merchant, Erfurt, Germany.

Circular from The E. C. Brown Co., Rochester, N. Y., showing some of their latest types of Spray Nozzles.

Spring 1910 Catalogue of Trees and Plants from Maloney Bros. & Wells, Nurserymen, Dansville, N. Y. Illust.

Wholesale Trade List of the Mount Arbor Nurseries, E. S. Welch, Prop., Shenandoah, Iowa, for Spring of 1910. Includes Hardy Fruit and Ornamental Trees, Roses, Shrubs, Evergreens, etc. Apple Seedlings and Apple Grafts, Forest Tree Seedlings.

Mail Order Price List for Spring, 1910, of Stark Bros. Nurseries & Orchards Company, Louisiana, Mo. Also Announcement of the Stark Year Book for 1910.

From Harlow Rockhill, Experimental Plant Breeder, Conrad, Iowa, folder on his Spring 1910 New Hybrid Everbearing Strawberries.

Seventy-second Annual edition of Dreer's Garden Book for 1910, from Henry A. Dreer, 714 Chesnut Street, Philadelphia, Pa. Catalogue of Seeds, Plants, Bulbs, etc., with cultural notes incorporated. Illustrated.

1910 Catalogue of Seeds from Vaughan's Seed Store, 25 Barclay St., New York. Illustrated.

"Sweet Peas Up-to-Date," booklet from W. Atlee Burpee & Co., Seed Growers, Philadelphia, Pa.

Twenty-Sixth Annual Catalog from The Whiting Nursery Company, Yankton, S. D., for Spring, 1910. Fruit and ornamental trees small fruit plants, garden roots and plants, evergreens, ornamental shrubs, climbing vines, bulbs and roses.

Also trade list of surplus stock, and 1910 calendar.

TARGET BRAND MAKES A GOOD RECORD

By M. T. FRAME

The Protumna Apple Orchard, owned by Mr. John W. Stewart, Martinsburg, W. Va., produced this last season about 6000 barrels of apples, over 95 per cent of which graded No. 1 and produced a pack which brought testimonial letters from a dozen different states of the Union, as well as from England, Scotland and Germany. Nothing but the Target Brand spray materials has been used in this orchard for several years. After a thorough study and many experiments as to the best methods of applying the different sprays the following methods were adopted as producing the best results.

Target Brand Scale Destroyer at 1 to 20 sprayed through "Mist" Nozzles at a pressure of over 125 pounds, beginning as soon as the leaves dropped in the fall. For experimental purposes a number of trees in this orchard have been sprayed nine times in the last five years with oil with absolutely no accumulative effect (so called) from the oil. These trees are the healthiest in the orchard.

Target Brand Arsenate of Lead two pounds in 50 gallons of water, was sprayed through direct drive "Bordeaux" Nozzles at a pressure of 125 to 225 pounds. Just as soon as the petals of the middle blossom of the cluster of blossoms began to fall, three Compressed Air Outfits were started at once and the entire orchard of 100 acres was covered in six days drenching the blossoms by driving the spray straight into them before the calyx cups closed. No second spraying with Arsenate of Lead was necessary.

Target Brand Quick Bordeaux (4-6-50 Formula) was used with the Arsenate of Lead on York Imperial but not on Ben Davis. During June the whole orchard was covered with a heavy application of Bordeaux to hold the foliage. The Bordeaux was made fresh daily and every tank was tested with Potassium Ferrocyanide solution for non-acid test. Much of this Bordeaux was still sticking to the foliage at picking time.

THE PEAR INDUSTRY AND PEAR BLIGHT

The great enemy of the pear all over the United States is the Blight. Blight is caused by bacteria in the sap. Bacteria is of the lowest order of germ life; it is thread shaped and about one nine-thousandth part of an inch in length. Being located in and confined to the sap, the only way to prevent inoculation of the sap and to repel the germs after the sap is inoculated is to treat and medicate the sap. To try to kill blight by spraying the outside of the tree is like trying to check typhoid fever by rubbing the skin with permanganate of potash, carbolic acid or some other germicide. All experiments along that line have failed. Statistics show that blight is increasing. Scientists say there is no cure or preventive for blight further than cutting the diseased limbs away and cutting out the canker blotches on the bodies and large limbs of the tree. These canker blotches or hold over blight, as they are called in California, furnish the fermented sap laden with bacteria which oozes through the bark and comes to the surface in the spring and is eaten by about fifty kinds of insects, especially by bees and ants. Then these insects visit the flowers and buds of the trees and

deposit the bacteria and blight is the result of the proper preventive is not used.

A preventive preparation has been discovered and patented in the United States and in Canada. This compound is applied to the bodies and to the large limbs of trees by a paint brush. It does not wash off by rain. It does not evaporate. There is no water in it. It penetrates the bark and taints the sap to the extent that bacteria does not and can not live in it. After blighting trees have been treated on their bodies and large limbs up three or more feet and as soon as the sap has become tainted the downward trend of the blight ceases. It is not necessary to cut out the canker blotches on the bodies and limbs of trees. A thorough application of this preparation to said canker blotches when the trees are being painted serves a double purpose. First it kills the bacteria. Second, it repels all insects.

This treatment has been in use nine years; first, locally in Kansas and Missouri, and for the last five years it has been used in many states by leading orchardists and nurserymen who own thousands and tens of thousands of pear trees and in every instance it has proven a success. References can be given that will satisfy any reasonable man.

All varieties of pears may be planted in good ground and given thorough cultivation, so as to obtain the best quality of fruit. They can be as safely grown as cottonwoods. If treated from the start they will never show blight.

Apple twig blight and the blight of nut bearing trees is probably the same as pear blight.

Independence, Mo.

R. WARNOCK,

THE NECESSITY OF SPRAYING AND THE MACHINES TO USE

In this the age of spraying it seems almost superfluous to mention its necessity but I am asked so often whether it really pays to spray that I address this open letter to all farmers and fruit growers answering the question: It certainly does. If your trees are affected with San Jose Scale, Oyster Shell Scale or any of the scale diseases you must spray if you would protect their health, for if you do not it will be only a matter of time until your orchard will be destroyed. Spraying with the lime-sulphur solution is a positive prevention for any of the scale diseases, there are also several ready made solutions on the market that are equally good and much easier applied, which are probably better for those who have only a few trees. I have seen orchardists that to the ordinary observer would appear to be ruined which were saved by proper pruning and spraying, but don't let the scale get a start as it is so easy to control and will do very little damage to the trees if you spray them as soon as the scale appears. Watch your trees closely and if there are any signs of scale send a twig that is affected to your State Experiment Station and they will tell you whether it is scale or not and also what to do. Spraying for scale must be done while the trees are dormant and they should be sprayed now, and again before they bud out in the spring. Often the foliage comes out, spraying with Bordeaux with a suitable insecticide is very valuable in increasing the crop and promoting a healthy growth of the trees and fruit.

THE MACHINES TO USE

Don't make the mistake of buying a cheap low pressure pump as an experiment for if you do you will surely be disappointed in the results. It is absolutely necessary to have a high pressure machine to get the desired results. Buy a first class high pressure sprayer in the start and you will find it the best investment you ever made in the line of farm equipment as it will pay for itself a great many times even on a small orchard the first year. The pump should also have thorough agitation to insure an even distribution of the solution, the valves should be of brass, preferably brass balls as they are always sure to seat properly and give better pressure and will last longer. Don't buy a pump with leather or rubber about the valves or plunger as the strong spraying solution soon eat them out. For the ordinary farmer or fruit grower a good barrel sprayer costing from twelve to fifteen dollars, or one of the hand combination potato and orchard sprayers would be the best to buy. It should be equipped with an extension rod as a high pressure machine will not throw the spray very high owing to the resistance of the air. Many people have a mistaken idea about high pressure sprayers as they think a high pressure machine should throw the spray high up in the tree but this is not the case as they produce a vapor spray which is almost as light as the air and therefore cannot be thrown very high, making the use of a rod necessary. For the large orchards the two or four wheeled traction sprayers are very desirable as they have large capacity and require no hand pumping and have no engine to cause trouble. If you raise potatoes also buy a combination potato and orchard sprayer which will answer both purposes. I will gladly answer free of charge any questions on spraying or spraying machines that any of the readers of this paper may want to ask.

E. H. LAMIELL,

Canton, Ohio. *Secretary of the H. L. Hurst Mfg. Co.*

THE AMERICAN ROSE SOCIETY

The Executive Committee and other members have held two conferences in New York in regard to the details of the coming rose show. The total amount of prizes offered in the schedule reaches some \$1500. In conjunction with the rose show, the Horticultural Society of New York has a preliminary prize schedule, the total of which comes to \$700.

Messrs. S. S. Pennock-Meehan Co., of Philadelphia offer a special prize of \$25 to be awarded in the discretion of the committee.

Messrs. Moore, Hentz and Nash offer a solid silver cup, valued at \$50 for the best six (6) roses, two to be white, and four to be red, pink or yellow, American Beauties excepted.

Messrs. Wm. F. Kasting Co., offer a prize of \$25, wherever it can be best used.

The Toronto Horticultural Society offer one of their silver and bronze medals. Mr. Arthur T. Boddington offers a cash prize of \$25.

Messrs. Stumpp & Walter Co., offer a special prize, for Private Gardeners only, for 25 Richmond Roses of \$10 and \$5.

The Horticultural Society of New York will issue jointly with the American Rose Society the Preliminary Prize List and rules within a few days. Mr. Joseph A. Manda has been appointed superintendent of exhibits. President Pöhlmann is urging the Chicago people to make a fine exhibit in New York. The New England people will be present with the best that they can produce. This exhibition is regarded by some of the strong people in New York as one of public education, at which it is expected thousands will be present. Vice-president Pierson, ex-president Simpson and treasurer May are at work like beavers to insure the practical success of the undertaking.

BENJAMIN HAMMOND.

Doings of Societies

CONNECTICUT FRUIT GROWERS MEET IN ANNUAL SESSION

The Connecticut Pomological Society held its 19th annual gathering in Unity Hall, Hartford, February 2d and 3d. The meeting was one of the biggest and best horticultural events of the year, and eminently successful in its efforts to encourage the growing of more and better fruit in Connecticut and give practical help to Connecticut fruit growers. A special feature of the exhibits was a large display of implements, fruit packages and fruit growers' supplies, and an extensive display of spraying machinery and supplies. Every effort was expended to make the gathering one of great profit and pleasure.

NINETEENTH ANNUAL MEETING OF THE AMERICAN CARNATION SOCIETY

The largest and best convention yet in the annals of the American Carnation Society convened at Fort Pitt Hotel, Pittsburgh, January 26th and 27th. The big English banquet hall of the Hotel was the scene of many magnificent stagings of the "flower divine," and never before were so many and creditable new varieties brought together. "Hoosier Lad," staged by F. Dorner & Sons Company, captured the premier award of the gold medal.

Wednesday afternoon many visited the H. J. Heinz Company plant of the "57 varieties" where they were hospitably entertained and given souvenirs. In the evening a smoker was given by the Pittsburgh Florists' Club, while to the visiting ladies of members of the A. C. S. a theater party was given.

President Albert M. Herr in his address to the Society on the improvement of their business methods presented recommendations which aim to make membership to the Society a necessity to all live carnation growers, and to give the organization the rank it should hold. Throughout the sessions most helpful and suggestive papers were read. The report of the Nomenclature Committee showed that the Society had registered 21 seedlings and 2 sports. The question of the advisability of the American Carnation Society and the American Rose Society holding joint meetings was discussed. Boston was voted the 1911 Convention City where, it was advocated, the meeting could be held conjointly with that of the National Flower Show.

Thursday evenings the Pittsburgh Florists and Gardeners' Club tendered a banquet in the English banquet hall of the Fort Pitt Hotel to the A. C. S. and guests. The scene was a brilliant one of extraordinary beauty, and the banquet was a huge success. The spirit of hearty good fellowship and enthusiasm that prevailed characterized this successful convention throughout.

The officers elected for the new year are: President, Fred Burki of Gibsonia, Pa.; vice-president, Allan Peirce, of Waltham, Mass.; secretary, A. F. J. Baur, of Indianapolis, Ind.; treasurer, Fred Dorner, of Lafayette, Ind.

REPLACEMENT

"I take the position favorable to the practice of replacing at half catalogue price, trees that die within one year after planting, if well cared for by the planter, the cash to accompany the order to ship and express charges to be paid by the planter. Where this replacing is done by the salesman, the trees are to be delivered with other trees sold at the same point, the salesman to get little or no commission on replaced goods, it being an advantage to him to do the replacing at half price which inspires confidence and good will, and greatly influences his securing another order.

I am speaking of nurseries who use salesmen rather than catalogue trade. I am conscientious in this position. I believe it just and fair to the planter, as the average sales are handled through salesmen especially. It begets a feeling of confidence of being well treated among our customers. There is no better asset for the nurseryman than a reputation of fair and liberal treatment among the customers. It is a great favor and help to the planter and in the end proves no hardship to the nurseryman, properly handled.

It will be urged that the practice is abused. That may be, but that is not the fault of the practice. The same men who abuse this practice will abuse any practice you may inaugurate. It will be said, notes taken are rendered worthless. Such notes were never any good then. Make your notes secure and strong and they will stand. It is urged that people will falsify about it. Such people will falsify about any other practice, and such customers must be dealt with justly and with a firm hand. Eliminate the weak, slack, twisted poor salesman and have this half price replacing done in a good business way, and it is a success. There are other reforms we would do well to make before cutting this out. Grow a better class of stock, grade it better. The grading of southern nurserymen is poor and uncertain. Pack the orders better. In ordinary salesman practice, each order should have roots mossed and burlapped separately to insure the stock to arrive in good order. How many of you are satisfied that you get your deliveries made in good order! I am conversant with the situation in a general way, and believe half price replacing just and right.

The catalogue nursery occupies a different sphere somewhat, I think. He must speak for himself.

Of course, we do not replace wholesale orders, only those sold at retail prices, at single, dozen and hundred rates.

It is well to have a definite plan and have it stated on the order sheet, and have the plan carried out faithfully. I should greatly dislike an attempt to make this change. I am sure the majority will not do it, even though we vote it here."

JNO. S. KERR,

Jan. 14, 1910. *Meeting of Texas Nurserymen's Ass'n.*

RESOLUTION TO DO AWAY WITH REPLACING OFFERED
BY D. J. MUNCY AT THE MEETING OF THE TEXAS
NURSERYMEN'S ASSOCIATION, JAN. 14, 1910

"WHEREAS, the policy of replacing nursery stock at less than full value, heretofore extensively practiced in this state, has resulted in serious loss to the nurseryman, exercised a demoralizing influence over the salesman, and has

not really benefitted the planter because it has encouraged negligence on his part in planting and looking after trees and plants purchased by him, and led him to underestimate the value of such nursery stock sold him, and

WHEREAS, this association was instituted and is maintained to promote the best interests of both nurseryman and planter, which said interests are being seriously crippled by the above policy mentioned, and

WHEREAS, said practice necessarily tends to destroy the confidence of the planter in the nurseryman, and produces in his mind an erroneous impression as to the real value of the goods sold by the nurseryman,

NOW, THEREFORE, be it resolved, that this association unqualifiedly condemns the said policy of replacing nursery stock at less than its full market value as being unwise, unbusinesslike and wholly unnecessary, and,

BE IT FURTHER RESOLVED, that the real interests of the nurseryman and planter will be best promoted by the exercise of sound business methods in this, as well as other dealings with them."

CONTROL OF CODLING MOTH IN UTAH

Director E. D. BALL, Utah Experiment Station

ED. NATIONAL NURSERYMAN,

Sir: The situation in Utah with reference to codling moth control is very satisfactory. As the result of six years of campaigning and a large number of demonstrations in practically all of the valleys of the State, the system of spraying is becoming fairly uniform in the commercial orchards. Almost without exception the driving spray is used and the number of sprayings vary from one to three and four, two or three sprayings being the usual number given in the better class of orchards, one spraying directly after the blossoms fall and one in about seven to ten days after the first. Both of these sprayings are applied from a tower, with poles of ten to twelve feet in length using the flat shaped spray nozzle setting at an angle, care being taken to see that the poison is driven into every calyx cup. The third spraying is usually put on at the time of the first occurrence of the second brood, and this and any later sprayings are usually applied as cover sprays.

As a result of this work nearly every commercial orchard section is producing apples comparatively free from worms. The average percentage of wormy apples in our better class of commercial orchards for the last three years has ranged from two to five per cent. At the last session of our legislature we passed a law making it a misdemeanor to sell wormy fruit. After one year of enforcement of this law, the people of the state are practically unanimous in their support of the measure and we feel that we are getting the situation pretty thoroughly under control.

SULPHUR SPRAYS FOR BLISTER MITE

BLISTER MITE INCREASINGLY PROMINENT

Five years ago the blister-mite was almost unknown to apple growers of Western New York. Today it is second only to San Jose scale as a topic for discussion where orchardists meet, says F. H. Hall, in Geneva, N. Y., Bulletin 306. The damage caused by this pest has undoubtedly been overestimated in some cases; the danger from it is not to be compared with that from scale, but the peculiar spotting of the leaves and their unhealthy yellow appearance can not fail to attract attention in any affected orchard. Premature dropping of the leaves must diminish the vigor of the tree and lessen its productiveness the second season, if not the first, and the reduction in size of the fruits and their distortion when directly attacked by the mites are very evident damages. The mite has spread rapidly in the past three years and is now quite common in orchards generally throughout the principal apple-growing counties of western

New York. It is impossible to estimate closely the damage done by the mite, since injuries from other causes like poor drainage, insect attacks, unfavorable weather and spraying mixtures are mistaken for work of the mite or combined with it. Many careful fruit men, however, believe that their orchards have been, or are liable to be, so much injured by the pest that they must adopt some repressive measures against it.

TESTS OF SPRAYS

In the planned experiments four orchards were treated, one owned by the Station and three by others who cooperated in the tests. Experiments were also made, not under Station direction, by owners of eleven other orchards. These volunteer experiments are especially valuable as showing the practicability of treatment for mites. Each of these orchards was quite seriously infested before treatment and in each case the result was such decided lessening in numbers of the mites that the injury to foliage or fruit was reduced to a minimum.

In the Station orchard comparison was made between sulphur washes (both home-made and commercial preparations), miscible oil and kerosene emulsion. These tests were made both on parallel plats through the orchard and on parts of individual trees treated by thirds, fourths or fifths as necessary to accommodate the mixtures compared, reserving a check section on each tree. Fall and spring spraying were also tested side by side.

In none of the other orchards was the treatment so varied, but in twelve of the fifteen, the lime-sulphur wash was given a good test with excellent results; in the other three, miscible oils or kerosene emulsion were used. In most of these orchards, unsprayed areas or trees were left; and on these or on orchards of neighbors, the work of the mites was much more noticeable than on sprayed sections. On treated trees, as a rule, only scattered leaves showed spotting, the main body of foliage was green and vigorous and in some cases the leaves were apparently larger than those on unsprayed trees. Pimpling and distortion of the fruit were almost highly prevented. The spraying often so improved the foliage that the contrast between treated and check areas was plain, even at considerable distances from the orchards.

In the cases where comparisons were made, particularly in the Station orchard, little difference in effectiveness was to be detected between the different sprays. Marked differences were found, of course, in the effect in the various orchards; but these variations were usually due to the diverse standards of spraying held by those who made the applications. In one case only about one and one-half gallons of wash was applied to a tree, in others five, while in most cases seven or eight were thought necessary for good treatment, and in one case ten gallons was used. Even with the minimum applications decided reduction of the mites was secured.

HOME-MADE CONCENTRATED SULPHUR WASH

A new feature in these tests was the use of concentrated sulphur washes, both commercial and home-made. These compared favorably with the ordinary boiled washes, and they possess some merits which recommend them. The home-made concentrated wash, in particular, should be widely tested by orchardists for the mites. Its advantages are two: It may be prepared in concentrated solutions to be diluted as needed; and it has no coarse sediment to clog the nozzles and to cause the rapid wearing out of the packing, lining and other parts of the pump. This mixture and the commercial preparations now enable many of our fruit-growers to use a sulphur wash, who for the reasons given have refrained from using this spray as prepared by the old method.

FORMULA FOR BOILED-LIME SULPHUR WASH

Lump lime	20 pounds
Sulphur	15 pounds
Water	50 gallons

PREPARATION OF SULPHUR SPRAYS

Place the lime and sulphur in the cooking receptacle containing about fifteen to twenty gallons of water. Stir the mixture frequent-

ly and boil for one hour. Add water to make the required amount of wash and strain through a fine brass-wire strainer into the spraying tank. Applications should be made while the wash is warm.

FORMULA FOR HOME-MADE CONCENTRATED LIME-SULPHUR WASH	
Lump lime	60 pounds
Sulphur	125 pounds
Water	50 gallons

Slake the lime in the cooking receptacle and stir in the sulphur, which has been made into a thin paste with water. Add enough water to make about 45 gallons of mixture, which should be boiled for one or more hours. After the cooking is completed allow the wash to stand until the sediment has settled to the bottom, when the clear, brownish liquid should be drawn off. To this add water, if needed to make the required 50 gallons of concentrated solution.

For use, dilute the concentrated sulphur solution at the rate of five gallons of the liquid to 45 gallons of water. To every barrel of 50 gallons capacity, of the diluted spray, add from 10 to 15 pounds of lime, made into a paste. The addition of the lime is not necessary, but by its use the trees are given a whitewashed appearance, which enables farmers to judge better of the thoroughness of their spraying. This mixture may be used immediately after cooking, or may be barreled, to be drawn on as occasion requires. A greater dilution than that recommended may perhaps be employed in spraying for the mite. To avoid the loss of sulphur, the sediment that remains after drawing off the concentrated solution should be boiled over again with fresh lime and water, and the liquid used to start fresh preparations or for purposes of dilution.

COMMERCIAL LIME-SULPHUR PREPARATIONS

During the past year, a number of these preparations have appeared on the market. Two of the most widely advertised have been quite extensively tested in various Station experiments with the blister-mite, and at the strength employed, one part to nine parts of water, have proven very efficient remedies. A number of fruit growers who have heretofore equally satisfactory results. fruit growers who have heretofore refrained from using the lime-sulphur wash for the mite, because of the trouble of making and the expense of a suitable cooking outfit, may now use one of the commercial brands. Usually some lime paste should be added to these preparations, as, without it, it is difficult to tell how thoroughly the applications have been made.

DIRECTIONS FOR USING SULPHUR WASHES

Applications of the lime-sulphur wash may be made in the fall after the majority of leaves have fallen or in the spring until the buds commence to break and to show the tips of the young leaves. Treatment should not be made later than this as the sulphur sprays are very destructive to the tender foliage and the mites may have gained entrance into the leaves, where they would be beyond the reach of the mixtures. If it is desired to treat the trees in the spring, the usual spraying at this time with the bordeaux mixture is unnecessary. While the chemical reactions are not well understood, the usual amount of arsenate of lead may be added to the wash. By following this plan the work of spraying for the mite is greatly simplified, and for this reason it is generally preferred by orchardists. Liberal quantities of the sulphur wash should be applied and the trees after treatment should have the appearance of being completely whitewashed.

BUSINESS MOVEMENTS

HOUSTON, TEX.—The LaPorte Orchard Co. has been incorporated to grow, sell and purchase seeds, plants, trees, etc. The capital stock is \$10,000, and the incorporators are Daniel Powell, J. H. Powell, and W. A. Pitrat of Kansas City.

NEW HAVEN, CONN.—The Northeastern Forestry Co. has completed negotiations for the purchase of 100 acres of land in Cheshire, to be used as a forestry nursery. The company's plant in the Adirondacks will be removed to the new site,

The Florists' Exchange.

Correspondence

FROST IN CALIFORNIA

Regarding frost damage, no one can tell just how much fruit has been affected. It is quite a large figure expressed both in damage to the crop and to the probable demoralization of the market.

I would not be willing to make anything but the wildest kind of a guess on the result of the frost as to shortage of cars, but should say that from fifteen to twenty per cent of the fruit should not be shipped.

There are many localities that were not damaged at all. The heaviest damage was done in the largest producing districts.

I do not know that the frost is an unmixed evil. It serves to draw attention to the boundaries of the citrus area, and to check the planting of trees in unproven territory. It also accentuates the value of territory that is above the frost line, and we hope will also result in higher prices for absolutely sound fruit.

H. B. C.

FOR NINETEEN ELEVEN; AN OPEN LETTER

DEAR MR. STARK:

On behalf of the Missouri Botanical Garden, I have very much pleasure in extending through you an invitation for the American Association of Nurserymen to meet in St. Louis in 1911. The Garden, I hope, will be able to welcome the gentlemen in attendance at the meeting as its guests at one of the banquets provided for by the will of the founder of the Garden, and if the Association decides to meet here, and the Progame Committee will inform me of the evening on which such a banquet can be attended with the greatest convenience to the Association, I shall endeavor to arrange for it to be given at such time.

I shall take much pleasure in requesting that this invitation be seconded by the city and various local organizations, and shall be obliged if you will kindly let me know when it will be best to have such invitations extended, either now, or at about the time of the Denver meeting.

Assuring you that if the Association meets once more in our city, we shall do everything in our power to contribute to the success and pleasure of the meeting, I am,

MR. W. P. STARK,
Louisiana, Mo.

Sincerely yours,
WM. TRELEASE,

Director Missouri Botanical Garden, St. Louis.

NORTH FLORIDA PECAN DEVELOPMENT

A region in which pecan growing is making great strides is in central north Florida near the picturesque town of Monticello. The leading company in this section is the north Florida Pecan Company, president, John Craig, Ithaca, N. Y.; treasurer, J. L. Bayard, Jr., First National Bank, Vincennes, Ind.; Secretary, H. D. Simpson, Vincennes, Ind. This company owns upwards of 1400 acres of land half of which was planted two years ago to paper shell named varieties. The planting is being extended each year. Other orchards are being set out and the region is

fast becoming noted for the production of trees and nuts. There are several bearing orchards which abundantly prove the fitness of the soil and climate for pecan culture. The pecan nurserymen of this region supply a goodly share of the propagated stock sold to the trade.

THE LATEST FROM TENNESSEE

The nursery business here seems to be in flourishing condition. The demand for peaches is something enormous. Growers are nearly sold out on peach already and expect by the first of the year to be pretty well cleaned up. We would like to have double or triple the stock now on hand. The demand for pears and most other trees is also good.

The outlook for the next season is also very encouraging. From present prospects prices will go higher on peach and apple particularly, and we look for good prices on all lines of stock.

TENNESSEE WHOLESALE NURSERIES,
Winchester, Tenn. AUBREY FRINK, *Mgr.*

FOR INSECT CONTROL

The Commissioner of Agriculture for the State of New York is asking the support of nurserymen and fruit growers to secure an appropriation as an emergency fund for use in case the state is invaded with such dangerous insect pests as gypsy or brown tail moth which is at the present time close to its borders on the east. This movement was supported by a resolution passed by the Western New York Horticultural Society and will undoubtedly receive the undivided support of plant growers.

CONTROL OF IMPORTED STOCK

"The State Department of Agriculture has no power over this imported stock. We have no right to inspect this imported stock. It comes into this State with international inspection certificates, and though we have inspected this stock we had no right to do so. But we do give the right to sell this stock. If we found the stock infested, we would withhold certificate and could prevent their shipping this stock out.

Imported citrus stock has come in here budded on Zuzu stock instead of Trifoliata. Good in Japan, but not good for Satsuma here.

But there proves to be only about one tree in a thousand in 1908 shipments and think it an oversight. This year there proves to be little or none of these oranges on Zuzu stocks. These importers propose to make good all such trees by correcting these mistakes. The Department of Agriculture has not been derelict in the case of these importations. We are seeking to do justice to both home growers and importers.

There is now no protective tariff on citrus trees."

SAM DIXON,

Jan. 14, 1910.

Meeting of Texas Nurserymen's Assn.

IMPORTERS ASSOCIATION OPPOSE INSPECTION AT PORT OF ENTRY.

At a recent meeting of the Importers Association, a strong resolution was passed opposing the Symons bill now in the Federal House which provides for the inspection of nursery stock at the port of entry, on the ground that such inspection is impracticable.

OPPOSING THE SYMONS BILL WHICH PROVIDES INSPECTION AT PORT OF ENTRY

DEAR SIR:

I have the honor to enclose a copy of a resolution passed at a special meeting of the Horticultural Importers Association held in New York on February 1st, voicing their disapproval of Bill known as H. R. 15656 regarding inspection of Foreign Nursery Stock which I understand is now before you for consideration.

The following facts will I think prove to you that the above measure is "impracticable" and "impossible of execution."

The arrivals at the port of New York for the past 11 days of French Nursery Stock were as follows, which is about the average weekly shipment for the past three months:

Per S. S. Mexico,	January 20—927	cases
" " Oceanic,	" 24— 20	"
" " New York,	" 29— 22	"
" " Florida,	" 31—406	"

1375 cases

Each case contains 10-15,000 seedlings (some cases contain 40,000) so that the 1375 cases contain an approximate total of 17,000,000 seedlings valued when shipped at approximately \$60,000 or at the dock New York approximately \$100,000 which includes about \$26,000 paid to the United States Government in import duties

The above shipments represent almost exclusively Seedlings from France (representing raw material for Nurserymen) which cannot be produced in the United States. The import duty exceeds in some instances two hundred per cent of foreign cost. The seedlings are packed tightly by means of machinery and appliances in paper lined cases and unpacking in transit would greatly damage contents even if they could be repacked into the same cases.

Entry has to be made and duty paid to the United States Customs within 48 hours to comply with Customs regulations. The cases must be removed within 3-4 days to comply with Steamship regulations and a glance at above figures will prove to you that it cannot be done, even though the present congestion on the docks be entirely overlooked.

I shall be pleased to answer any questions you may wish to ask or to give you any further information within my power. Like fleas on a dog, insect pests should be killed, but I do not see why a valuable dog should be killed to get rid of a few fleas, when the fleas are not harmed by the killing of the dog anyway.

Yours truly,
J. McHUTCHISON.

THE IMPORT IMPROVEMENT BILL

WHEREAS: In January, 1909, a Bill known as H. R. 27367 was introduced into the United States Congress, providing for the inspection of nursery stock at ports of entry of the United States, which Bill passed the House, was before the Senate and was being considered before the Nurserymen had knowledge of it.

AND WHEREAS, The Legislative Committee of the American Association of Nurserymen at that stage, receiv-

ing information that such a Bill was being considered, secured a hearing before the Committee on Agriculture, Dr. Howard, the father of the Bill being present, and after lengthy argument succeeded in having the Bill withdrawn on the understanding that the Legislative Committee of the American Association of Nurserymen would prepare a new Bill which would be acceptable to Dr. Howard and the Nurserymen of the United States.

AND WHEREAS: The Nurserymen did prepare such a Bill having the endorsement and approval of the American Association of Nurserymen and the Association of Horticultural Inspectors but though repeated efforts have been made to arrange a conference with Dr. Howard, those efforts so far have been without result.

AND WHEREAS: On December 16, 1909, Bill known as H. R. 15656 was introduced into the House by Mr. Symons the text and purport of which is exactly the same as the former Bill known as H. R. 27367 and to which the Nurserymen and kindred interests so strongly objected.

THEREFORE BE IT RESOLVED, That the Horticultural Importers Association here assembled protests against the passage of Bill H. R. 15656 as being impracticable and in the present congested condition of the New York docks impossible of execution without large unnecessary losses being incurred, and as the Nurserymen's Bill provides for adequate inspection at destination, which we believe to be the only practical and effective way, we strongly urge that the Bill prepared by the Legislative Committee of the American Association of Nurserymen be substituted for H. R. 15656.

AND BE IT FURTHER RESOLVED: That the Secretary of this Association be authorized to forward a copy of this resolution to the Hon. Chas. F. Scott, Chairman of the Committee on Agriculture, the Hon. W. W. Cocks of New York and the other members of the Committee on Agriculture.

STARK BROS'. HANDSOME YEAR BOOK

There has just come from the press the most sumptuous fruit and plant catalogue which we have seen. It is the work of that progressive firm, The Stark Bros'. Nurseries and Orchards Company, Louisiana, Mo. This issue marks the first volume of a series which is to be published annually. The striking and distinctive feature of the book is its illustrations. These are in the form of full page illustrations in color, often depicting the fruit in its natural size. The work is uniform in this respect, but not only are fruits illustrated but characteristic representatives of perennials, vines, ornamental trees and shrubs are included and displayed in the same effective manner. Associated with the rich illustrations is appropriate descriptive text. The whole work typifies the advance in catalogue making as illustrated by our most progressive firms. The volume represents business courage, commercial ability, appreciation of plants, and an artistic temperament. The makers of the work are to be congratulated.

Among the Nurserymen

DOVER, DEL.—The American Pecan Co. has been incorporated to engage in a general nursery business and nut culture. The incorporators are Wilmington charter representatives, and the capital stock is \$500,000.

WASHINGTON, D. C.—Regret has been expressed by the President and by Mrs. Taft because the 2000 Japanese cherry trees, presented by the municipality of Tokio to this Government, have been found to be infected with root gall worms, certain fungus diseases, and insect pests. The trees were to have been planted in Potomac Park, but the Secretary of Agriculture has found it necessary to recommend the destruction of the trees.

OLYMPIA, WASH.—The Supreme Court has decided in favor of defendants in the Spokane case of the Inland Nursery & Floral Co., against H. C. Rice, J. H. Mumm and E. L. Rice. The action was brought to cancel and hold void for fraud, stock held by the defendants. Rice & Mumm were engaged in the floral business at Spokane and organized this company with \$50,000 capital and so sold their business and good will to the corporation for \$25,000 paid up stock. Others were induced to invest \$17,000 cash in stock of the company. It was claimed by plaintiffs that the business, instead of being worth \$25,000 was worth less than \$2,000. It made no difference, said the Supreme Court, what the actual value of the property was so long as the corporation gave its stock in payment, and it cannot now claim the deal was one-sided nor can new stockholders complain.

MARSHALL, Mo.—The National Nursery Co., of Lawrence, Kans., has established an office here with Col. Preston in charge.

AUSTIN, TEX.—The Port Arthur Nursery Co., has been incorporated with a capital stock of \$40,000. Incorporators are Fred Clark, C. E. Smith and R. H. Woodworth.

LOUISIANA, Mo.—Stark Bros., through their assistant treasurer, Wm. H. Stark, have purchased land at Girard, Pa., in the famous New York-Pennsylvania Grape Belt. Mr. Stark also purchased for the Company an excellent farm at Marionville, Mo., where he spent several weeks locating the ideal soil of that section for the growth of delicious apple trees.—*The Florists' Exchange*.

Feb. 5, 1910.

Business Movements

"FRIEND" SPRAYER FACTORY TO ENLARGE



At a special meeting of the Board of Directors of the "Friend" Manufacturing Company of Gasport, N. Y., on Tuesday, February 8th, 1910, it was voted to double the efficiency of the present plant by the addition of a large fire-proof structure, to be used for the installation of the new and modern machinery which the Company have recently purchased and contemplate purchasing for another season's work.

The residence property of Rev. George Hull, the general manager adjoining the Company's property on the east was purchased for this new addition, and it was voted to proceed as rapidly as possible with the construction of the building. The Company reports that each year their business doubles each preceding year, and this proposed addition will greatly facilitate in filling orders promptly for the celebrated "Friend" Spraying Outfits, that are now being shipped into all parts of the world.

Clematis Paniculata Strong Plants in Quantity. Lowest Prices.

F. A. BALLER, Bloomington, Ill.

New Seedling Gooseberry Carrie?

Is a live proposition for up-to-date people. It is proving a wonderful **MONEY-MAKER**. Each year gaining in popularity with the best fruit growers. Write us today for full description (Name this paper).

ELLIOT & REDPATH, 1412 W. 47th St., Minneapolis, Minn.

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EM. Van ESPEN, President

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Miners of High Grade Florida, Tennessee and South Carolina Phosphate; **TENNESSEE RAW GROUND PHOSPHATE ROCK**, all grades

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HARDY SHRUBS TREES, VINES
EVERGREENS AND PERENNIALS

A large and fine stock of well-rooted plants grown in sandy loam. Good plants; best sizes for planting very cheap. Priced catalog free on application.

WHOLESALE AND RETAIL

T. R. WATSON, Plymouth, Mass.

HEDGE 200,000 CALIFORNIA PRIVET 200,000 HEDGE

250,000 AMOOR RIVER PRIVET 250,000

We also have 150,000 each in California and Amoor River in 6 to 15 inch for lining out. These are well rooted plants and will make fine stock for delivery next fall.

VALDESIAN NURSERIES

Bostic Department

BOSTIC, NORTH CAROLINA

KILL BUGS IN GROUND

APTERITE will do this—it's cheap—easy to use—kills Aphids, Maggots, Cutworms, Wireworms, etc. Write for our 32-page Booklet "N"—contains numerous letters American users—it's free. A post card brings it.

WILLM. COOPER & NEPHEWS, 64 W. Illinois St., Chicago

Splendid assortment of standard and new sorts. Now is the best time to engage all varieties, and the only time to secure some varieties. Send list of approximate wants for lining out.

THE LEEDLE FLORAL COMPANY®
SPRINGFIELD-OHIO

EXPERT
ROSE
GROWERS

FOR SPRING OF 1910

We have our usual supply of NURSERY STOCK

We still have a few hundred thousand Scions to offer

John A. Cannedy Nursery and Orchard Co.

Carrollton, Ill.

HEADQUARTERS FOR

Pure Speciosa Catalpa and Black Locust Seedlings

Write for Prices

COOPER & ROGERS, Winfield, Kansas

CONDITIONS IN TEXAS

South:—"We grow two things in South Texas, oranges and figs. We have a big trade and a scarcity of stock, and believe the trade will consume the supply for another year also. Home grown trees are better than foreign. A sharp freeze in February is about all we have to fear this season. Trees that went dormant at proper time were not hurt by freeze in December. Satsuma is the most hardy of all the good oranges."

W. A. SLOCKWELL,
Texas Nurserymen's Assn.

Jan. 14, 1910.

East:—"Conditions in East Texas are fairly good. East Texas people do not do the best. We need more enterprise. If we could get the people to do their best, we could skin you prairie people a city block. We have the country to grow trees in and you have the country to sell in. There is not the interest in commercial peach orchards there used to be. I think we of East Texas should again plant commercial peach orchards. There is money in it.

As to apple trees, most of our best orchards have mossy roots and they grow and succeed. No commercial fig orchards in our section. Rather too far north."

M. G. BLACK,
Texas Nurserymen's Assn.

Jan. 14, 1910.

"HOW CAN WE MAKE BETTER COLLECTION IN THE RETAIL BUSINESS, ESPECIALLY ON DEFERRED PAYMENTS"

From a paper read by J. W. Tucker of Waxahachie at the meeting of the Texas Nurserymen's Association, January 14, 1910.

"Summing up the whole matter and putting it in condensed form—sell your stock right by employing the right kind of men, deliver it according to contract in every sense of the word, impress on the minds of your patronage that it is worth one hundred cents on the dollar, that your responsibility ceases when stock is delivered in good condition, and your collections will be what you want them to be and you will realize as you have never realized before, the profits of the business which you, as a nurseryman, so richly deserve."

The Aphine Manufacturing Company of Madison, N. J., gave a public test of their insecticide—Aphine—at the store of the Henry F. Michell Company, 1018 Market St., Philadelphia, Feb. 12th. Plants, shrubs, and stock infested with insects or disease were submitted at this test for the demonstration of the merits of their new insecticide.

FLORIDA EAST COAST FREEZE NOT SEVERE

Reports from Dade County, Florida, of the East Coast freeze state that the tomato and vegetable crops are in good condition and the cold weather will not affect the tomato output. There is but a small increase in acreage, and practically every acre killed by the cold spell has or is being resct. The heaviest losses fall upon pineapple growers. Pineries all along the East coast look bad, and no reliable estimate of what crop will be can be made.

BUREAU OF PLANT INDUSTRY—Bulletin 162

This bulletin gives an inventory of the seeds and plants imported from January 1 to March 31, 1909. It shows that something over a thousand consignments have been received, covering the whole range of economic plants. All parts of the world have contributed, including foreign seedsmen, missionaries and travelers.

WANTED

A young man with some nursery experience to assist in Herbaceous Department. State wages wanted. CHAS. R. FISH & Co. Worcester, Mass.

WANTED

A Practical Foreman for Nursery. A good job to the right man.

Write at once to

W. E. McELDERRY, Princeton, Indiana

WANTED--

We expect to increase our capacity and are in the market for quantities of Nursery stock (mainly young stock) of all kinds at bargain prices. Quality must be of the best. What have you?

PITTSBURG NURSERY CO., Pittsburg, Kansas
117 W. 5th St.

WANTED

Peach Seed, Currant, Gooseberry and Poplar Cuttings
State price and amount you can furnish

OAK HILL NURSERIES, Franklin, Mass.

FOR SALE

Well equipped Nursery Plant with good, thriving retail business in the heart of Michigan Fruit belt. For particulars write "EQUIPPED" NATIONAL NURSERYMAN.

FOR SALE--Western Nursery

Forty acres of deeded and forty acres of leased land. Stock all salable size; clean and healthy; not a scale or bug. Trade has almost doubled each year. We ship 5 to 12 hundred miles west and north of us. Trade to be supplied unlimited. We have a complete general line of Nursery Stock. We do a strict catalogue business. Are well advertised and have a good name.

Will sell for cash, or part cash and time on balance to a man who knows his business and is a pusher. This is a good investment and will pay a good dividend. Address

"NURSERYMAN"

care of NATIONAL NURSERYMAN, this office.

FOR SALE

55 Acre Nursery, stocked with over 300,000 Fruit, Shade and Ornamental Trees and Shrubs. Concrete Office and Frost Proof Storage, Tool House and large Packing House. Fine nine room residence with all modern improvements. City water in all buildings and all property inside the city limits; half mile from Post Office and one mile from depot. Soil the very best upland clay loam.

\$6,000.00 in signed orders. Many of the orders are for landscape work for private and public grounds, from \$50.00 to \$350.00. This Nursery is especially stocked for modern landscape work with the very best native and standard shrubbery. Sales will exceed \$10,000.00 at shipping time. Property inventories \$22,500.00. Will make heavy sacrifice to quick buyer. Good reasons for selling. Address

A. H. LAKE, Black River Falls, Wisconsin

"HOW WE CAN MAKE 1910 THE BEST YEAR OF OUR RECORD"

Extract of an Address Delivered before the Texas Nurserymen's Association at their Mid-Winter Meeting in Dallas, January 14, 1910, by Jno. S. Kerr.

"First of all, let us remember that we be brethren, that there is a large element of prosperity which we share in common. We owe it as a common duty to uphold the dignity and high standard of the nursery business. The day of "wildcating" in nursery practice, while never permissible in the past or present, certainly has no place with us in the future. From the nurseryman and salesman to the grower, let our methods and dealings be set upon the high plane of integrity, probity and fairness. May we also be alert, watchful and progressive in everything tending to the uplifting and advancement of our calling. Let us continue to originate and introduce only the finest varieties. Let us grow better stock, do better grading, better packing and delivering, enforcing only the highest and best methods in our selling and in our delivering. Let the same high standards prevailing in the growing be enforced among our salesmen. The day of the "Shyster" salesman has gone forever. None but the highest and best methods are permissible or successful. Charge good prices for improved up-to-date stock. Everything the nurseryman uses has doubled in price of late years, therefore an advance in prices of his products is proper and right.

Your customers will not object to paying a price that will insure a fair profit. In fact, the world despises "Cheap-John" stuff and appreciates and wants to pay well for the better article.

Finally, let me say, "In union there is strength." Every progressive enterprise today must have organization. There are nearly three hundred nurseries to whom the Department of Agriculture has issued certificates of inspection. Of these, perhaps two hundred are nurserymen proper, the others only growing and selling a few trees on the side. The Texas Nurserymen's Association is working for and is promoting the interests of the nursery business of Texas in general and should be supported by every nurseryman in the state. We should have two hundred members. The membership fee of two dollars annually, would give us a fund of four hundred dollars annually with which to work for our general interests, and we need it. Thousands of dollars are being saved to the nurserymen in freight rates alone as a result of efficient organized effort in the national association. There are many other things we can do to build up our business. Let every nurseryman in this and adjoining states line up and do his duty by becoming a member. Send \$2.00 to the secretary.

I have great faith in the nurserymen of this country. There are progressive men. The prospects for the year are good. I believe we bid fair to have a very successful year in 1910. Quit you like men, and the goal is yours."

FRUIT GROWING IN ALABAMA

Extract from President W. F. Heikes' Address before the Alabama State Horticultural Society at its Seventh Annual Meeting, January 28th and 29th, at Bessemer, Ala.

Comparatively speaking, there are as yet not many very large horticultural enterprises in Alabama, but there seems no reason why with wisely selected fruit trees and plants, and well directed efforts in their planting and care, we should not have a steadily increasing number of large and profitable orchards, nut groves and farms growing small fruits. There is a constantly increasing demand for good fruit and the high prices it brings is a great inducement to the grower to enlarge his plantings.

I would again emphasize that for the Southern States pecan culture may be regarded as one of the most attractive and profitable of horticultural pursuits, and for the following reasons: The trees are long-lived, ornamental, highly profitable and little liable to injury from injurious insects and diseases. Then, too, the nut suffers much less from climatic changes during the period of ripening and gathering than the products of other orchard trees in the south. There is no haste necessary in gathering the nuts and they can be kept for months without any pronounced deterioration, and shipped without danger of injury on the way to market. Furthermore, the pecan nut is now regarded as the most popular of all the nuts produced.

GRAPE VINES

Large Stock, properly graded.
None better in the Chautauqua Belt.
Let us know your wants.

Miner & Miner

Sheridan, N. Y.

SAN-U-ZAY SCALE OIL

CONTAINS NO ACID, AMMONIA, SOAP OR ANY CAUSTIC MATERIAL

Can be used as a summer spray in nursery work.
Costs about half the cost of other sprays.

25 years' experience in the manufacture of soluble oils, back of our product.

WRITE FOR OUR PRINTED MATTER

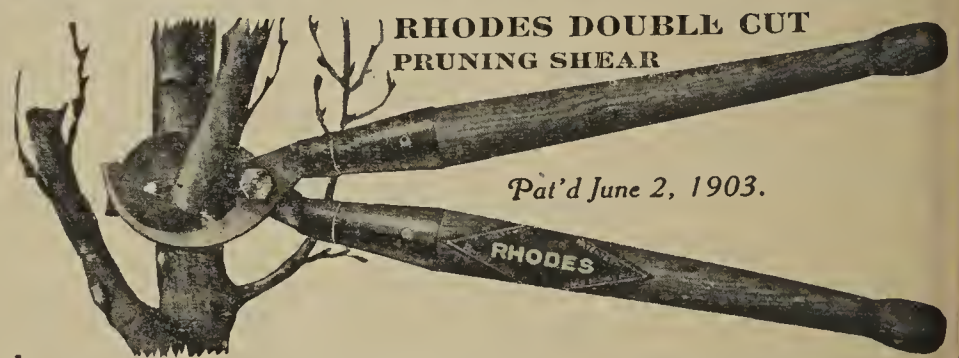
Gives in full, Scores of Reports

F. G. STREET & CO., 17 Railroad St., ROCHESTER, N. Y.

WE OFFER one year's subscription to the NATIONAL NURSERYMAN and one copy of Webster's New Illustrated Dictionary, 1,100 pages, limp leather binding, red edges, round corners, for \$2.50. The Dictionary is a condensed Encyclopedia, containing all the information required by the business man. This offer holds good on renewals or advance subscriptions. Dictionary itself retails at \$2.50.

NATIONAL NURSERYMAN

ROCHESTER, NEW YORK



The only pruner made that cuts from both sides of the limb and does not bruise the bark.

MADE IN ALL STYLES AND SIZES

We pay Express charges on all orders.

Write for circular and prices.

RHODES MFG. CO., Grand Rapids, Mich. Dept. M.

Trees That You Can Sell "On Honor"

Your professional reputation depends upon the trees you sell. An order of "named" trees that turn out to be something else will often do you untold injury. Doubtless you have often found it difficult to secure "true-named" specimens, which require to be grown in the South. But here is a satisfactory solution of this difficulty: Trees from

Glen Saint Mary Nurseries

are true to name, and you can sell them "on honor." Our system of growing and grading, and the rigid test every variety gets in our Trial Orchards, keeps up a standard that few Nurseries can approach. Large orchards now in bearing throughout the South prove the excellent quality of our trees. Full particulars, Catalog and Wholesale Price List mailed on request.

Glen Saint Mary Nurseries Co., Glen St. Mary, Florida

The planting of pecan trees of improved varieties has been steadily on the increase within recent years, both for commercial and home orchards.

A subject of great interest to the orchardists of the Gulf Coast States is the planting of the Satsuma Grange, and we hope to learn as much as possible about it at this meeting, especially the degree of success those have met with who have groves in fruiting.

There has been such a stimulus to plant fruit trees in every part of the United States that the demand for trees has been beyond any past experience and has simply made it impossible for the nurserymen to meet it. It is worthy of note that the planting of peach trees in commercial orchards throughout the South is much greater than during the two preceding years. The general prosperity and educational awakening along the line of civic and home improvement have created a noteworthy and gratifying demand for ornamental trees, shrubs and other decorative plants throughout or Southland.

Two of the great menaces to the success of commercial orcharding still remain, the insect pests and the late spring frosts. The first, as we all know, can be controlled in no small measure by judicious care of the trees and spraying, and the other danger can be avoided to a large extent by the use of the orchard heater, if properly managed.

ROOT GALL

(Notes from the Texas Nurserymen's Association Meeting, Jan. 14, 1910.)

C. C. Mayhew of Sherman, Texas, stated further that a feature of the meeting was a demonstration by Marshall Brothers, showing that crown gall was not so damaging as generally held. They have ten healthy trees planted ten years ago, which are bearing finely, the fruit having taken first premiums at the fairs, and these trees were badly afflicted with crown gall when planted. It is the general feeling that inspectors are causing trees to be destroyed which ought not to be, and are thus imposing on the nurserymen. There were about fifty nurserymen present. A very fine convention. It was also related that there was an experiment at Manhattan, Kansas College. Clean trees and knotty root trees were planted ten years ago, and they make no evil report on these trees. They now report that it is impossible to tell the difference. In fact, infested trees lived the best. There are other cases.

Mr. Jno. S. Kerr gave instances of crown gall on peach trees where orchards were badly diseased and condemned, but left to grow, bore fruit well for ten years, then were dug up and crown galls found to be dead and the trees suffering no perceptible inconvenience. There are numerous such instances. On most good soils the galls die and rot off. In poor and very sandy soils they frequently kill the trees. In fact, many poor sandy soils produce this disease after the trees leave the nursery.

A. D. Jackson, of Denison, president of the State Horticultural Society, said, fourteen years ago he planted apples trees with crown gall, and they are still bearing and are vigorous and healthy.

Catalogues Received

Nursery Conditions and Interests in Oklahoma. J. T. Foote, Durant, Okla.; North Texas, J. L. Downing, Wichita Falls, Tex.; South Texas, W. A. Stockwell, Alvin, Tex., and R. H. Bushway, Alcoa, Tex.; East Texas, Jno. F. Sneed, Tyler, Tex., and M. G. Black, Mt. Pleasant, Tex.; Southwest, Texas, W. J. Shulze, Bangs, Tex.; Plains Country, L. N. Dalmont, Plainview, Tex.

Summary of Nursery Inspection for the Past Year in Texas.—Sam H. Dixon, Chief Inspector, Austin, Tex.

How Can We Make 1910 the Best Year of Our Lives?—Jno. S. Kerr, Sherman, Tex.

Special Bulletin for December on "Clean-Up" Bargains in Nursery Stock and Nurseryman's Supplies from the Chase Nursery Co., Huntsville, Ala.

Folder from the Thomsen Chemical Company of Baltimore, Md., on their "Orchard Brand" Tested Products manufactured by them and designed for orchard use.

CAROLINA POPLAR BOX ELDER
CALIFORNIA PRIVET and CATALPA SPECIOSA
ALL ONE YEAR OLD

For further particulars and prices, address

SOUTHWESTERN NURSERY COMPANY
C. M. REDMOND, Gen'l Mgr. Okemah, Okla.

BOX STRAPS
WARD-DICKEY STEEL COMPANY
INDIANA HARBOR, IND. Mfrs. of Planished Sheet Steel

Easterly Nursery Co.,
CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS.
Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.
Can also furnish a few of the leading varieties.
It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

GRAPE VINES A SPECIALTY
T. S. Hubbard Company
FREDONIA, N. Y.

ESTABLISHED 43 YEARS

We offer for Fall and Spring trade a large and complete stock of one and two year old **GRAPE VINES** in strong grades for nurserymen and dealers trade.

We also have an extra nice stock of one year **CURRENTS**.
Send us your want list for prices.

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CHARLES CITY, IOWA.

Large Growers of **HARDY STOCK** In the Northwest

Over 20,000,000 Evergreens in stock, 1,000,000 Grape, 5,000,000 Apple, and 100,000 Plum are counted among our assortment this year. We are also extensive growers of a general line of Hardy Nursery Stock.
AGENTS WANTED

Surplus Stock, Spring, 1909

50,000 PEACH TREES, 1 yr. from bud.
10,000 APPLE, 1 yr. from bud.
100,000,000 STRAWBERRY PLANTS in six leading sorts.

MYER No. 1, AROMA, STEVEN'S CHAMPION.
Superior. Gandy.

A general assortment of other stock.

D. S. MYER & SON, Bridgeville, Del.

AS A FAVOR

Renew your subscription to the National Nurseryman promptly.

ANNOUNCEMENT

Owing to the fire in the Rialto Building, where we had our offices for many years, we have located in the Reliance Building, Tenth and McGee Streets, Room 418. We shall be pleased to welcome you in our new offices, and shall take great pleasure in serving you to the very best of our ability. Thanking you for your past favors, we remain,

KANSAS CITY NURSERIES,
Both Phones 370 Main GEORGE H. JOHNSTON, Prop.

A RARE OPPORTUNITY

It is seldom that a thriving nursery is placed upon the market for sale and at reasonable terms. Such an opportunity is however offered to any prospective buyer by a business in Wisconsin. We are convinced of the genuineness of this chance and of the possibilities offered to anyone seeking either to enter the nursery business or to enlarge a present business. Notice will be found in the advertising columns.

DENVER AND THE CONVENTION

Indications are that this year's gathering of the Nurserymen of the United States at Denver, Colorado, June 8th, 9th and 10th, for the Thirty-first Annual Convention will be large and enthusiastic.

The new secretary, John Hall of Rochester, N. Y., expects shortly to issue a circular letter to members setting forth the arrangements made for hotel accommodations and terms, as well as information concerning railroad rates and special offers. The competition on the part of hotels has been lively. Those who know anything about "The Queen City of the Plains," know also that it is a popular convention center, and an ideal place for an association like that of the American nurserymen to meet in.

The Entertainment Committee has been extremely active. Chairman Frank A. Weber, Peter Youngers and A. M. Ferguson met in Denver, Feb. 17th, and arranged for the following entertainment to be given by the Western Nurserymen to the members attending.

Afternoon of June 8th, the ladies attending the convention will be given a sight-seeing trip through Denver.

Afternoon of June 9th, the ladies will be entertained at a matinee in one of the theatres; and on

Friday, June 10th, (subject to the action of the Program Committee) the committee has arranged for a sight-seeing trip over the Moffat Route to Corona, for the members and their wives. This is said to be the finest scenic route out of Denver, and has been styled by eminent civil engineers as the greatest piece of engineering in the world. Nurserymen are urged to take advantage of this splendid display of hospitality. Luncheon will be served on the trip. A special train will leave Denver at a convenient hour in the morning, returning in the late afternoon. Other features which will be announced later have also been arranged.

The Western Nurserymen hope that the members from the East will be well represented. Besides those already mentioned, the members of the Entertainment Committee are: F. H. Stannard, ex-officio; J. W. Hill, C. G. Ferguson, and Geo. B. Fravert.

A FORTUNE IN APPLES

Our Colorado orchards produced last year over one-half the price we are asking for them. Price low. Terms easy. Write today for full particulars. Nurseryman Isaac Conner, 331 Board of Trade Bldg., Omaha, Neb. Representatives wanted.

Plants! Plants! 800,000 Chipman

700,000 Bubach, 100,000 Parsons Beauty, 100,000 Gandy, 100,000 Crimson Clusters, 50,000 Chesapeake, 50,000 Fendall and lots of others too numerous to mention. Cumberland B. C., Kansas B. C., Lucretia Dewberry. Before ordering elsewhere get my Catalogue; it is FREE.

MOSLEY'S NURSERIES, Dover, Del.

PERFECTION A NEW RED RASPBERRY

Of ironclad hardiness and great productiveness; the best yet. Send for circular and price list.

VALLEY VIEW FRUIT FARM

G. G. Velie & Son, Prop., - - Marlborough, N. Y.

"Equal to the Best and Better than the rest."

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Stands at the head of Lime and Sulphur Solutions. Kills all scale. Nothing better for Nursery Stock.

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Strawberry Plants

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J. S. LINTHICUM, Wellhams, A. A. Co., Md.

California Privet Fruit and Shade Trees
Evergreens

SAMUEL C. DE COU

Moorestown, Burlington County, N. J.

LA FER INSECTICIDE

Analyses prove that sap of the wood and leaves of fruit trees etc., can be inoculated by applying it on the soil, being absorbed by the roots. Scale and other insects feeding on the sap will be destroyed.

For free pamphlet, address

J. W. LA FER, Sta. B., R. F. D. No. 2, Box 2A.
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PEONIES { The cream of our 1200 sorts.
Greatest collection world-wide.

IRIS—All types, extra list.

STRAWBERRIES—Extra fine plants, best sorts.

DAHLIAS, GLADIOLI, CANNAS—The very best sorts.

CINNAMON AND MADERIA VINES.

HYDRANGEA ARBORESCENS STERILIS—Hill's variety—big stock.

C. BETSCHER, Canal Dover, Ohio, U. S. A.

F. E. SCHIFFERLI

FREDONIA, N. Y.

Successor to WHELOCK & CLARK

AT IT SEVENTEEN YEARS

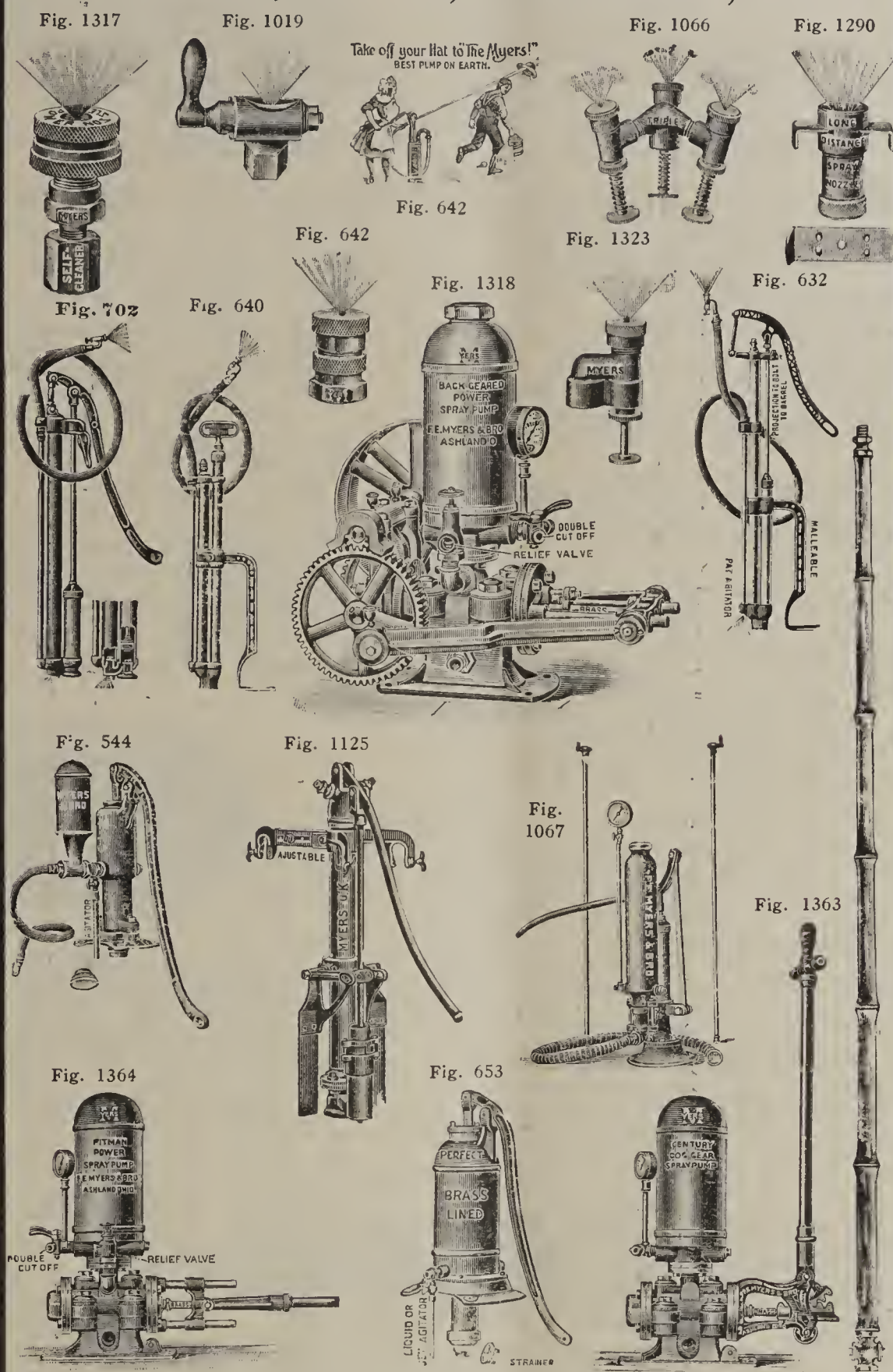
For Fall 1909 and SPRING 1910

GRAPE VINES AND CURRANT PLANTS

GRAPE AND CURRANT CUTTINGS
CORRESPONDENCE SOLICITED

Myers Spray Pumps

NOZZLES, HOSE, FITTINGS, ETC.



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F. E. MYERS & BRO.

ASHLAND PUMP & HAY TOOL WORKS

Ashland, Ohio
190 Orange St.

IS THE NURSERYMAN MAKING THE PROGRESS FINAN-
CIALY THAT THE OTHER BUSINESS
INTERESTS ARE?

"If the nurserymen of Texas had been paid a decent price for their work in proportion to the other men, they would have been millionaires; as it is, they are not able to come up to this meeting. Let us elevate the business, let us charge a reasonably decent price. We will gain prestige thereby. It is due us, the people expect it. We are doing business on the old basis of cotton at 5c a pound. Let

us put our business on a plane commensurate with the advanced price of all other commodities.

It takes more business ability to carry on your business than it takes to run the Government of the State of Texas. The restrictions of law are bearing heavily upon the nurseryman. You deserve better pay than you are getting. You should demand better prices for your stock. Grow better stock and ask better prices for that stock."

E. W. KIRKPATRICK,

Jan. 14, 1910. Meeting of Texas Nurserymen's Association.

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NURSERIES
420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for **WHOLESALE
CATALOGUES**

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BARBIER and CO., Successors,

Orleans, France

FRITSCH & BECKER

WHOLESALE SEEDSMEN

at GROSSTABARZ, Thuringia, GERMANY

are prepared to accept contracts on the following
Specialties for

DELIVERY FALL 1909

FRESH SEEDS of MULBERRY, WILD CHERRY,
MAHALEB CHERRY, PLUM, QUINCE, APPLE,
PEAR, DOG ROSE, BLACK AND HONEY
LOCUST and many other sorts.

Price List on application
WANTED: American Evergreen Tree Seeds
Offers will oblige

Vincennes Nurseries

W. C. REED, Prop., - VINCENNES, IND.

OFFER FOR FALL 1909

Cherry 2 Year in Car Lots

Cherry 1 Year in Car Lots

Our Cherry promises very fine both in 1 and 2 year.
Also general line of other Nursery Stock.

Cherry Buds to offer in any quantity in season ready
to cut July 1st.

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FRUIT AND SEED FARMS

OFFER for Fall 1909 and Spring 1910

GRAPE VINES—One and two years old. Varieties
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Also Scarlet or Crimson Clover Seed and Cow Peas.
Free from weed seeds, all re-cleaned and guaranteed
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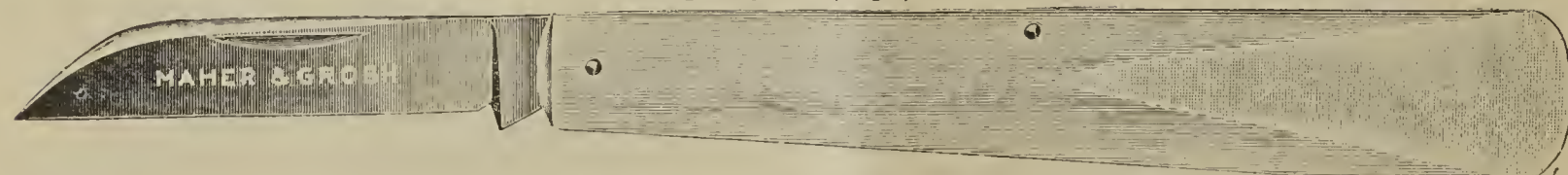
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Prompt shipments. Write to day for full information.

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PROPAGATING KNIFE No. 89, 50c. Blade Closes; White Handle. Same Handle, but with Budding Blade, same price

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Hand Forged Razor Steel Warranted

Nursery Pruner, 50c
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Neither do we. But if you have any problems to solve or want any advice, we can direct you to the best source for information.
We can get you the best books on any subject. Write us when you are up against it.

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Everything in

Small Fruit Plants.

Ask for price list.

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First-Class Stock for February and March Delivery

Peach 7-16 and up to 1 inch	Chines Cling 80	Greensboro 500
Sneed 800	Triumph 1000	E. Crawford 600
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Smock 400	Old Mixon F 500	Gen. Lee 1001
Heath 1800	Baldwin 100	Popular [Pyramidalis] 200
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Kieffer pear 1-2 in. and up to 1 1-8 3000 and a few other pears.
Cherry 1-2 in. and up to 1 1-8 Richmond, Dyehouse and Gov. Wood.
Carolina Poplar, Box Elder, Catalpa, Althea and Lilac, white, purple.
Send want list and get prices.

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CHERRY TREES

An especially fine lot of one and two year Cherry, on which we can make attractive prices. They are especially well rooted, with clean, vigorous, well-branched tops; also

California Privet Keiffer Pears
Satsuma Oranges Carolina Poplar
Budded and Seedling Pecans

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Successors to J. C. Hale

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Budded Pecan Trees

Japan Persimmon, Japan Walnut,
and Muscadine Grape Vines . . .

Are Leaders to the Trade this Year.

We also offer a general line of Nursery Stock, including Fruit and Ornamental Trees, Shrubbery, Field-Grown Roses, Etc., Etc. Prices always right.

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BIG SURPLUS OF CONCORD GRAPE VINES, CHEAP!

3 year No. 1; 2 year No. 1; 1 year No. 1; 1 year No. 2 and 1 year No. 3; all carefully graded up to highest standard.

Also full stock of other varieties and Small Fruits

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Hydrangea Arborescens Grandiflora

(American Everblooming Hydrangea)

We offer the largest stock of strong 2 year old plants in America of this finest HARDY ornamental Shrub introduced in fifty years and at extremely attractive prices.

Also strong plants of Teas' SNOWBALL HYDRANGEA (*Hydrangea Cinerea Sterilis*) a native species, distinct from the first mentioned, but a fitting companion to it. We have the only considerable stock of this plant in the world.

Also Flowering Shrubs, Peonies, Lilies, Dahlias, Gladiolus, Iris, Hardy Herbaceous plants in great variety. Lists free.

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Centerville, Ind.

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BEDFORD, MASS.

HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
HERBACEOUS PERENNIALS

We grow everything required for Orchard, Garden, Lawn and Landscape Planting.

Catalog and Trade-list on application.

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BOSKOOP, HOLLAND

Azaleas, Rhododendrons, Clematis, Roses, Pot-grown Plants for forcing. Buxus, Conifers, Japanese Maples, Shrubs, Palms, Bulbs, Etc.

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Ghent, N. Y., a grower of Fancy apples. I have less scale and finer foliage than ever before." REASON: Five years of consecutive use of

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REASON: Five years of consecutive use of

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cheaper, more effective and easier to apply than Lime-Sulphur. Send for Booklet. "Orchard Insurance."

PRICES: In barrels and half barrels, 50c per gallon; 10 gallon cans, \$6.00; 5 gallons cans, \$3.25; 1 gallon cans, \$1.00.

If you want cheap oils, our "CARBOLEINE" at 30c per gallon is the equal of anything else.

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ROSES - SHRUBS - CANNAS - PHLOX
JAPANESE IRIS - HERBACEOUS PAEONIES

ALL FIELD GROWN

Teas, Hybrid Teas, Hybrid Perpetuals, Mosses, Rugosas, Climbers, Ramblers Creepers. Thirty Types. Over Three Hundred Varieties.

Planting for the season of 1909-1910 is the heaviest in our history. Varieties are the BEST and QUALITY is there, better than ever before.

We want to figure with you Mr. Nurseryman on your future orders. We have the goods—QUALITY—QUANTITY—VARIETY—and can make the prices! Your correspondence will get "quick" action.

The United States Nursery Co.

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Osage Hedge, One Year Extra Fine

Grown for us at Rossville, Kansas on deep sandy soil. Famous for fine roots.

This Osage Hedge in Car Lots, cannot fail to please. BLACK LOCUST, RUSSIAN MULBERRY, HONEY LOCUST.

SPECIOSA CATALPA, Selected seed, guaranteed pure, our specialty for past ten years, grown by the million.

FANCY SHADE TREES CAR LOTS. Ash, Box Elder, Black Locust, Catalpa Speciosa, American White Elm, Soft or Silver Maple.

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Shade and Ornamental Trees

Russian Golden Willow

SEEDLINGS

CATALPA SPECIOSA

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OSAGE ORANGE

Flowering Shrubs and Evergreens

Write for prices

J. H. SKINNER & CO.

Station "A," Topeka, Kansas.

Fruit, Shade and

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∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

ESTABLISHED 1868

F. W. MENERAY

Crescent Nursery Co.

COUNCIL BLUFFS, IOWA

We offer our large stock of PAEONIES at a special low price for Fall 1909 and Spring 1910. Also a large stock of Cherries, Plums, Pears, Gooseberries, Deciduous Trees and Ornamental Shrubs.

SPECIAL ATTENTION—Complete list to dealers in car-load lots.

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Andre LeRoy Nurseries

BRAULT & SON, Directors

ANGERS, FRANCE,

are now booking orders for

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FOR NURSERY STOCKS OF THEIR OWN
GROWING, GRADING AND PACKING.

For Quotations apply to

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Old Dominion Nurseries
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We offer

CALIFORNIA PRIVET, one year extra fine
ASPARAGUS, one year
BARTLETT STANDARD PEARS, 2 year, nice stock
CHERRY, 2 year, strong, extra fine, sour varieties
HEMLOCK SPRUCE, mostly 3 to 4 feet
NATURAL PEACH PITS, crop 1909

Write for prices



Hydrangea
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"Hills of Snow"

Choice strong
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J. W. McNARY
Dayton, Ohio

200,000 Cherry Trees

One and Two Years; vigorous, healthy, at right prices—
all "BAGBY" grown—none better.

A Full Line of Other Nursery Stock

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New Haven Nurseries, NEW HAVEN, MO.

Strawberry Plants

Lusty, healthy, mountain-grown stock

MILLIONS OF THEM

Excelsior, Bubach, Klondyke, Lady Thompson, Aroma,
Gandy and all the best Commercial Varieties.

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We are the largest growers to the trade in above
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This is not all. Write for trade list.

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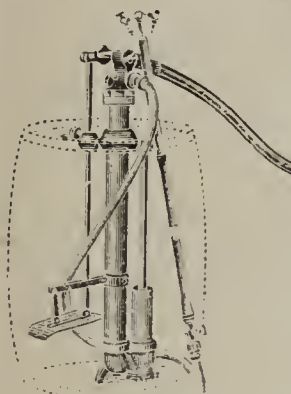
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14 " "	3.70	17.50	34.00	160.00
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The Eclipse is a good pump. As
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FRENCH CRAB APPLE SEED. Roots that will please everybody.

Will mail samples to buyers of large quantities.

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A general assortment of Fruit Tree Stocks, such as Apple, Pear, Myrobolan Plum, Mahaleb and Mazzard Cherry, Angers Quince, etc. Forest Trees, Ornamentals, Evergreen Seedlings, Roses, etc. The largest stock in the country. Prices very low. The very best grading and packing. Send for quotations before placing your orders elsewhere. Catalogue free.

Sole Agents for United States and Canada. C. C. ABEL & CO., 110-116 Broad Street, NEW YORK.

Handbook of the Trees of the Northern United States and Canada East of the Rocky Mountains

Photo-descriptive. By Romeyn Beck Hough, author of "American Woods." Profusely illustrated from photographs of leaves, fruits, winter twigs, typical barks of each species, magnified wood structures of principal species, and maps indicating distributions. 470 pp. (7x9½). Price \$8 to \$10. Express prepaid.

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We thoroughly recommend this book. It is worth more than its price.

It can be obtained from the

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E. T. DICKINSON,

CHATENAY SEINE, FRANCE.

Grower and Exporter of
French Nursery Stocks, Dutch Bulbs, Gladioli, Etc. Fruit
Tree Stocks. All grown for the American trade.

PEAR AND CRAB APPLE SEED,

The most complete assortment of Ornamental Stocks,
Trees and Shrubs.

Geo. E. Dickinson, 1 Broadway, N. Y.

Hydrangea Arborescens Grandiflora Alba

the true large flowering forcing variety, warranted true.
2½ inch pot plants; 18 to 24 inch strong field grown plants.
New trade list ready. Write for it today.

THE GOOD REESE CO., the largest Rose growers in the
world, Springfield, Ohio.

Black Locust Seedlings. 5,000 for sale cheap.

Get our prices at once.

PRINCETON NURSERIES, Princeton, Ind.

SURPLUS--Write for prices

10,000 Elberta, - - - 5/8-¾ and ¾ and up
3,000 Kieffer and Garber - - - ¾ and up
1,000 Apricot, 2 year, - - - 5/8 and ¾
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1,000 Wistaria, 2 yr. No. 1. Quince, 5/8

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L. H. BAILEY

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Sour Cherries, Japan Plums, Standard Pears, Champion Quinces.

Pecans, Japan Walnuts, English Walnuts.

A good stock of Shade Trees, many of them in large sizes.

American Arborvitae in sizes from 2 to 7 ft.

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Dwarf Arborvitae and Retinisporas.

A fine stock of Shrubbery in good assortment.

California Privet 1 to 3 ft.

10,000 French Pear Seedlings 7-12 mm.

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APPLE TREES, assorted, all grades

CHERRY TREES, assorted, all grades

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GRAPE VINES, assorted

A large and complete assortment of Shade Trees
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—Lucretia Dewberries— Paeonies

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have a splendid stock of the following Raspberry Plants

Kansas, Black Diamond, Palmers Early, Cumberland and Plum Farmer. Large stock of Early King and other Red Raspberries

Grape Vines and other small fruits for the wholesale trade. Also fine lot of Columbian (Purple) Raspberry Plants. **PRICES RIGHT.**

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JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

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THE IDEAL—The Grandest Berry in Existence Today

It has more good points than any known variety. The plant is a strong vigorous grower, sending out large, heavy runners, making strong, thrifty plants. Blossoms staminate or perfect. Season, medium to late. A very heavy cropper of large, uniform berries, holding well up in size to the last picking; the best shipper, the best canner; the best looker in the box; the best seller I ever had the pleasure to offer for sale. I have a limited supply of Plants, but will sell them while they last at a special rate, by mail, post-paid.

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Apple, Pear, Peach, Cherry and Plum Trees, Evergreens, Ornamental Shrubs, Roses, Gladiolus, Cannas and Dahlias

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IT DOES THE WORK. PRICE \$16.00.

Special 20,000 California Privet.

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EXTRA STOCKY PLANTS, 2 YEARS

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FINE TEXAS UMBRELLA

GENUINE
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In my thirty years' experience I have found nothing quite its equal. Does best in low, strong land. Try them. Other varieties, Aromas, Klondyke, Lady Thompson, Excelsior.

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IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
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*Advance Price List of Evergreen and Forest Tree Seedlings
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Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

We will also have our usual assortment of Fruits both large and small.

Shades, Shrubs, Perennials and Forest Tree Seedlings

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HAS THE USUAL EXTENSIVE STOCK OF
THE FOLLOWING :

CONIFERS including a quantity of well shaped specimens for decorative purposes. Low prices can be quoted on all Conifers.

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ROSES, Standards, Dwarfs and others.

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FRUIT TREES in large quantities.

Transplanted FRUIT TREE STOCKS.

RHODODENDRONS and other AMERICAN
PLANTS.

(A good stock of all hardy varieties of Rhododendrons.)

CLEMATIS and other HARDY CLIMBING
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Transplanted FOREST TREES.

THE STOCK IS IN EXCELLENT CONDITION
LARGE QUANTITIES SHIPPED ANNUALLY

To Destroy Aphis and Thrips
WITHOUT INJURY TO FOLIAGE
SPRAY WITH

"BLACKLEAF" TOBACCO EXTRACT

LISTEN TO THESE

ROGUE RIVER (OREGON) FRUIT GROWERS' UNION: "Black Leaf" does not burn nor injure the foliage or the fruit and will eradicate the aphis immediately.

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MR. A. N. JUDD, Watsonville, Cal.: For all plant lice, and green and black aphis, "Black Leaf" Tobacco Extract is the most gratifying of all washes.

PRICE: In 5-gal. jacket cans, 85c per gal.; in 1-gal. cans, \$1; f. o. b. Louisville, Ky. The usual Western price is 90c to 95c per gal. in 5-gal. cans, owing to increased freight.

USUAL DILUTION: For Green and Woolly Aphis, and Black Peach Aphis, 1 gal. "Black Leaf" in 65 or 75 gals. water. For Thrips, 1 to 50 or 60.

TO SAVE YOU FREIGHT: Write us for name of agent nearest you

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Greater Speed

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has a faster type bar action and a more perfect escapement movement than any other machine ever manufactured, evidenced by the fact that all championships are won on the Underwood.

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Choice Nursery Stock for Spring 1910

including

APPLES, CHERRY, PEACH, PLUM,

PEAR, GRAPES, SMALL FRUITS,

FOREST SEEDLINGS and SHADE TREES

SHRUBS and ROSES

Send us your list of wants and let us make
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25,000 Two Year Cherry Trees for Spring 1910

Our Cherry Trees were sprayed several times during the summer and held their foliage until Fall. They have nice straight body without any knots or scars and well formed heads, with good system of roots. This is an ideal lot of trees every way.

VARIETIES—Montmorency, May Duke, Ea. Richmond, Olivet, Dyehouse.

Heavy on MONTMORENCY. Fully half will run 3-4 inch up, balance 5-8 to 3-4, 5 to 6 feet.

Inducements made on early orders.

Parties wanting Cherry Trees can save money by corresponding.

Marble City Nursery Co.
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Small Fruit Plants

FOR THE NURSERY TRADE

SPRING 1910

**Black and Purple Raspberry Tips
Gooseberry Layer Plants**

Red Raspberry, Blackberry, Dewberry, Strawberry,
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Orange-Quince and Gooseberry Cuttings
Everything in Small Fruit Plants

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MINIMUM COST—MAXIMUM QUALITY.

This is demonstrated fully in our 1910 catalogue of **PERENNIALS** and other **HARDY PLANTS** which we grow exclusively by the acre. Free for the asking,

PALISADES NURSERIES, INC.

SPARKILL, N. Y.

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Waxahachie, Texas

28,000 Peach, 1 to 2 feet 31,200 Peach, 2 to 3 feet
The above in twenty-four varieties. **Nice clean stock.**

7,000 Plum, 1 to 2 ft.	5,000 Plum, 2 to 3 feet
4,000 Pear, 3/4 to 1 inch	5,000 Pear, 5/8 to 3/4 inch
4,000 Pear, 9-16 to 5/8 inch	Bartlett, Clapp's Duchess,
Flemish Beauty, B. de Anjou	1000 Kieffer, 4 to 6 feet
	2,000 Kieffer, 2 to 3 feet
5,000 Cherry, 1 to 2 feet	5,000 Cherry, 2 to 3 feet
7,000 Cherry, 3 to 4 feet	3,000 Cherry, 4 to 6 feet

One Year. Fine Roots. Clean.

5,000 Surplus Roses Strong Dormant Buds
One Year, 2,000 American Beauty

Let us quote you on the above. Correspondence solicited.

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Fumigation with Hydrocyanic Acid Gas Generated From Cyanide ^{98%}/_{99%}

Is the only positive eradicator of San Jose
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WE OFFER A COMPLETE ASSORTMENT OF NURSERY
STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust "
Small Fruits	Syringae	Fruit Tree "
Maple Norway	Clematis	Catalpa Speciosa Seed.
Maple Schwedlers	Honey Suckle	Etc., Etc., Etc.
Maple Silver	Wistaria	

Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

J. K. HENBY & SON

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For Fall 1909

We wish to Call Attention to Our Offerings of

PEACH—One Year and June Buds. We invite inquiries NOW from buyers of June Budded peach, plum and apricot. We will bud especially to suit YOUR particular wants.

PLUM—De Soto, Wyant and Japanese varieties

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

PRIVET—California and (true) Amoor River.

ROSES—Leading Hybrid Perpetuals, also Hardy Climbers.

MAGNOLIA Grandiflora, **SPIREA** Van Houttei and **ALTHEAS**.

Fraser Nursery Company

Incorporated

HUNTSVILLE, ALABAMA

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For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, combined with the quality of our product is unsurpassed.

Samples and prices are at the command of a communication from you.

Dayton Fruit Tree Label Co.

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BURLAPS

Sheet Burlaps for wrapping purposes
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Burlaps cut to size ready for use, 24, 28, 32
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Write for quotations.

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MY BUSINESS for several seasons has been growing very rapidly, and the season just past has far exceeded any former year. I have therefore been compelled to increase my acreage to meet the growing demand for my plants, and I expect this Summer to build an additional, large, up-to-date packing house, so that my daily output of plants will be greatly increased during the shipping season. This will enable me to handle promptly all orders that I receive. If you buy Strawberry Plants, get in communication with me before contracting for your next season's supply.

W. W. THOMAS

"THE STRAWBERRY PLANT MAN."
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SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil,
climate and expert knowledge.

Take a look at the stock or ask for a
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quality of their

TREES

H. M. Simpson & Sons,
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Ornamental Trees and Shrubs

*A large assortment of first class
stock in all sizes*

Cherry Trees

*Thrifty, well grown, carefully graded,
the kind that will please you*

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ARTHUR BRYANT & SON
Princeton, Ill.

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
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1 $\frac{1}{2}$ inch.

A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have full list of varieties for fall trade with special inducements for orders for late fall
delivery in car lots, or cellared for Spring if desired. Our facilities are unsur-
passed for handling these large orders. Try us and be convinced.

Not satisfied with our present large cellars, are now build-
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OUR SPECIALTIES ARE

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Moss

Ramblers

Climbers, Etc.

PEACHES

PEARS

PLUMS

CHERRIES



Ornamental
Trees and
Shrubs in
Car Lots

Weeping Mulberries
Elm and Ash

Clematis

Ampelopsis

Paeonies

Hydrangeas, Bush
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Holland Bulbs

KOSTER'S BLUE SPRUCE

NO TROUBLE TO PRICE YOUR WANTS

55 Years

1200 Acres

44 Greenhouses

THE STORRS & HARRISON CO.

PAINESVILLE, OHIO

Deutzia Lemoinei

Is one of the choicest small shrubs, covered
in the blossoming season with a
profusion of white flowers

We Have a Large Stock

WRITE FOR PRICES

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The "J & P" Preferred Stock

(You've heard of it!)

Some Specials for a March Sale to
Close Out

TREE HYDRANGEAS	TREE LILACS
CLEMATIS PANICULATA	SNOWBALL HYDRANGEA
LARGE-FLOWERING	WEIGELAS, Eva Rathke, etc.
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PERRENIALS Fine Collection	GOOSEBERRIES

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CRIMSON RAMBLER	DOROTHY PERKINS
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HYBRID PERPETUALS	MISCELLANEOUS ROSES
2,000 ROSE TREES	

March Bulletin, with Grade Counts, corrected to date,
now ready. Send for copy. Want Lists invited; attractive
prices quoted on above and other surplus.

Jackson & Perkins Company

Growers of The Preferred Stock
Newark, (Near Rochester), New York

March first.

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APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

IN CAR LOAD LOTS

We offer BIOTA AUREA NANA, Cedrus, Deodara, Junipers
and assorted Specimen Conifers.



BIOTA AUREA NANA

Figs, Spanish Chestnuts,
Althaeas, Deutzias,
Exochordas, Lilacs,
Philadelphus, Spiraeas,
Weigelas, and other De-
ciduous Shrubs.

Ashes, Elms, Maples,
Weeping Mulberries,
Tulip and Lombardy Pop-
lars, Lindens and Texas
Umbrellas.

Strong field grown ROSES,
Standard sorts, budded
and on own roots.

Citrus Trifoliata, Amoor
and California Privets.

AZALEAS, Camellias,
Magnolia Grandiflora,
and other Broad-leaved
Evergreens in great va-
riety

Send for Catalog

P. J. BERCKMAN'S CO., Inc.,

Fruitland Nurseries
Established 1856

AUGUSTA, GEORGIA
Over 450 Acres in Nurseries

FRANS VAN DER BOM

THE HORTICULTURAL AGENCY, Oudenbosch, Holland.

Before placing your orders ask for our prices.

Andromeda	Dracaena	Manetti
Araucaria	Evergreens	Norway Maple
Areca	Flowering Shrubs	Ornamental trees
Aspidistra	Forest Trees	Paeonies
Azalea (Hardy)	French ornamentals	Planes
Azalea indica	Fruit stocks	Phoenix
Bay trees	Hollies	Rhododendron (Hardy)
Beech, purple	Hortensia	Rhododendron (Parsons)
Buxus	Hydrangea	Roses, dwarf
Chestnuts	Japanese Maple	Roses, tree
Clematis	Kalmia	Roses, new varieties
Climbers	Kentia	Schwedler Maples
Cocos	Koster's Blue Spruce	Spiraea
Convallaria	Latania	Thorns
Conifers	Magnolia	Tilia
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HAVE you seen and examined the quality of our waterproof rawhide shipping tags and tree labels? This stock is



especially adapted to hard usage and outside use. "Once used, always used." Send for samples and prices. Our refer-

ences are the largest Nurserymen in the United States.

The Denney Tag Co.
WEST CHESTER, PA.

THE BEST TREE DIGGER ON EARTH



**Used and Recommended by Leading
Nurserymen**

The one we have used for years, and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed—and does it right. If interested we will be glad to send description and prices.

Stark Bro's Nurseries & Orchards Co.
LOUISIANA, MO.

Berberry Thunbergi

BUSHY PLANTS, 12 to 18 inches

SEEDLINGS, 3 to 5 inches, 2 to 3 inches, with 6 inch roots.

CAROLINA POPLAR

2 years, clean and smooth, nicely branched, 10 to 12 feet, 8 to 10 feet, 7 to 8 feet.

NORWAY SPRUCE

Several times transplanted. 3 to 4 feet, 2 to 3 feet, 18 to 24 inches.

ARBOR VITAE

Transplanted. 3 to 4 feet and 2 to 3 feet.

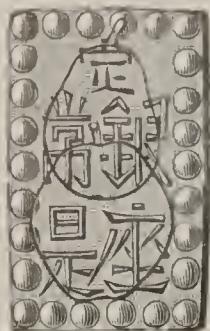
CALIFORNIA PRIVET

2 year cut back. Extra heavy, 3 to 4 feet, No. 1, 3 to 4 feet, and 1 year 18 to 24 inches.

This is the best stock **GOOD GROWING** can produce. We are long on these items and the price will please you.

C. R. Burr & Company
The Burr Nurseries
MANCHESTER, CONN.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries

Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for the Fall of 1909 and Spring
of 1910 in large quantities as usual :

SPECIALTIES

PEARS—Bartlett and Beurre de Anjou, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore

PEARS—Assorted leading varieties. One and two yrs. old.

CHERRIES—On Mahaleb. Leading sour varieties. A large block but not as many as usual.

PEACHES—We excel in Peaches, and of these we will have as large and as fine a stock as we have ever grown, both in one year and June Buds.

PLUMS—A light stock of these for this year.

PECANS—We make a specialty of grafted Pecans. These are grown in our branch nurseries at Biloxi, Miss., where the conditions are very favorable for their propagation.

ROSES—Budded. We have discontinued the propagation of Roses at Biloxi. We will have a large stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than Colifornia Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Horseshoe Brand Products

There is nothing more beautiful in a garden of a well-kept place than a few **Speciosum Lilies**. For spring planting we offer good bulbs of **LILIUM MAGNIFICUM**, the handsome Japanese red lily, in various sizes and at very reasonable prices. Write us.

Ralph M. Ward
& Co.

12 West Broadway
New York



NOT HOW CHEAP
BUT HOW GOOD

When Considering The Purchase of Raffia

If you were offered a grade of goods at a low price and the quality was guaranteed to be first class, you would not hesitate to try the goods if you needed them, would you? Certainly not. There would be no risk and no reason why you should.

That's just what we offer on **RED STAR Brand Raffia** which is sufficient reason for you to try it, but we will go one better and offer you the recommendation of nearly every nurseryman in the United States and Canada. They use it and continue to use it. The books in which all sales of **RED STAR RAFFIA** are entered show the same names last year as they did the year before and again this year the same ones as last year and many new ones.

When men buy your goods and continue to buy them year after year, in these days of keen competition, and wide awake business men, wouldn't you consider that an honest recommendation?

When you buy Raffia do you order **RED STAR**? If not, then why not? Others find it to their advantage to use it. You should at least investigate it. Send for a sample and prices. They are yours for the asking. We are headquarters. Large stock on hand at all times. Shipments can be made promptly or will be reserved for shipment any time you may instruct. Prompt attention given all orders. Place your order for this season's supply now.

Thomas Meehan & Sons
INCORPORATED

Direct Importers of Raffia

DRESHER, MONT. CO., PA.

B. & A. SPECIALTIES.

BLUE SPRUCE, all sizes, 2 to 7 feet.

WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.

ROSES, Hybrid Perpetual and Hybrid Tea varieties.

CONIFERS and **EVERGREENS**, 150 varieties.

RHODODENDRONS, Hardy Hybrid and Maxima, 50 varieties.

EVERGREEN SHRUBS, 35 varieties.

FLOWERING SHRUBS, 350 varieties.

JAPANESE MAPLES, 25 varieties.

ORNAMENTAL DECIDUOUS SHADE TREES, 50 varieties.

WEeping and STANDARD DECIDUOUS TREES, 50 varieties.

HEDGE PLANTS, 25 kinds.

HARDY VINES and CLIMBERS, 75 varieties.

PLANTS and TRAILING VINES, 12 varieties.

SPRING and SUMMER FLOWERING ROOTS and BULBS, 250 varieties.

DECORATIVE and FLOWERING PLANTS, 50 varieties.

TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries, Pears, Apples, etc.

SMALL FRUITS, 75 varieties.

NEW and RARE TREES, SHRUBS and EVERGREENS, 35 varieties.

MISCELLANEOUS NEW and RARE PLANTS and VINES, 25 varieties.

HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.

NEW and RARE CHOICE HARDY PERENNIALS, 65 varieties.

ORNAMENTAL GRASSES, 30 varieties.

HARDY FERNS, 50 varieties.

ASK FOR WHOLESALE CATALOG

VISIT NURSERIES

BOBBINK & ATKINS,

NURSERYMEN AND FLORISTS,

RUTHERFORD, N. J.

The Farmers Nursery Company

OFFER

APPLE, assorted, heavy in light grades
 PEAR, Standard, assorted, extra fine lot of Kieffer
 CHERRY, 2 year, the finest stock we have ever grown
 PLUM, Japan and English, good assortment of varieties
 PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.
 NORWAY SPRUCE, 2 to 8 ft.
 ARBOR VITAE, 2 to 4 ft.
 BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
 Catalpa Bungeii, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants.

Stock grown at Dansville, N. Y. and Troy, O.

B. E. Fields & Sons

Fremont Nurseries

FREMONT, NEBRASKA

Offer a General Line of Nursery Stock

APPLE, Keiffer and Garber Pear, Peach,
 Cherry and NATIVE PLUM

Our Native Plum are extra heavy and fine

GRAPES, Small Fruits, Shrubs

And a large line of

Forest Tree Seedlings

A FINE LOT OF SHADE TREES

W. FROMOW & SONS

Windlesham Nurseries, Surrey, England

Offer 250 acres of Hardy Outdoor Nursery Stock in great variety, chief among which may be noted the following:

Hardy Named Rhododendrons in such varieties as Everestianum, Caractacus, H. W. Sargent, C. S. Sargent, Kettle-drum, Chas. Dickens, Lady Armstrong, Atrosanguineum, Chas. Bagley, Alba elegans and grandiflora, Giganteum, Old Port, Fastuosum fl. plena, Roseum elegans, Delicatissima, Ed. S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the Parson's Hybrids.

Andromeda Floribunda, 20,000 to offer in bushy well grown plants 6 in. to 18 in.

Andromeda Japonica 6 to 18 in.

Azalea Mollis, seedlings from named varieties 4 to 24 in.

Ghent Azaleas, on own roots 12 to 24 in.

Azalea Pontica, the common yellow 12 to 30 in.

Gaultheria Shallon and Procumbens.

Kalmia Latifolia 6 to 30 inches.

Hybrid Tea, Tea, Polyantha and Hybrid Perpetual Roses, strong field-grown stock as Standards, Half Standards and Dwarfs in all leading varieties.

Copper Beech, selected seedling, specially good strain 3 to 9 ft.

Fruit Trees, trained, Espalier and Fan shaped.

Box, Handsworth and Common Tree 6 in. to 5 ft.

Retinospora Plumosa and Plumosa Aurea 6 in. to 6 ft.

Retinospora Pisifera and Pisifera Aurea 3 to 6 ft.

Retinospora Obtusa compacta 6 in. to 5 ft.

Abies Orientalis, Parryana, parryana Glauca and Kosteriana 6 in. to 4 ft.

FOR DELIVERY FALL 1910

We are within an hour's rail ride of London, and shall welcome the personal inspection of any Nurseryman visiting England. We shall not importune you to buy, the quality of our stocks will ensure business. Send orders timely to our sole agents for U. S. A. and Canada.

AUGUST ROLKER & SONS,

31 Barclay Street, P. O. Box 752, New York

Franklin Davis Nursery Co.

Baltimore, Maryland

We offer for Fall 1909 and Spring 1910---

Apple, 1 and 2 year, leading varieties.

Pear, Standard, Keiffer, Blight Proof, Koonce, Garber, Etc., Etc.

Peach, 1 year, standard varieties.

" 2 " June Buds.

Cherry, 1 and 2 year on Mahaleb.

Asparagus, best leading kinds, 1 and 2 year.

Privet, California, 1 and 2 year, fine.

" Ibota, 1 and 2 year.

Strawberry Plants, best varieties.

Grape Vines, 1 and 2 year; heavy on 1 year Concord.

White Birch, 10-12 ft., fine.

Silver Maple, 10-12 ft., 8-10 ft., 7-8 ft.

Sugar Maple, 8-9 ft., 7-8 ft.

Norway Maple, 7-8 ft., 6-7 ft.

Poplars, Lombardy & Carolina, 1, 2 and 3 year.

Catalpa Speciosa, 8-9 ft., fine.

Weeping Willows, 8-9 ft., fine.

Oriental Planes, 8-9 ft., fine.

We have a fine lot of Extra Heavy Shrubs, such as Hydrangea P. G., Weigelas, assorted; Altheas, assorted; Judas Trees, Spireas, assorted; Eulalias, Snowballs, Lilacs, Strawberry Tree.

In large Shade Trees we have Sugar Maples, Elms, Box Elder, Catalpas, Evergreens, Roses, Etc., Etc.

Would accept orders to bud Peach on contract. Can commence shipping October 1st, or earlier.

Send us your want list.



A Steamer from Holland with Lighter alongside loaded with Nursery Stock.



Overflow of Nursery Stock at one of the North River Docks.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII.

ROCHESTER, N. Y., APRIL, 1910

No. 9

HOW NURSERY STOCK IS RECEIVED IN PORT OF NEW YORK

A Summing up of the Conditions and Factors entering into the Problem of Inspecting Imported Nursery Stock at the Port of Entry

IS INSPECTION AT THE DOCK FEASIBLE?

How many nurserymen fully grasp the magnitude of the nursery import trade? With the view of investigating conditions as they exist at the docks of the great metropolis, a

pounds in weight. The bales may run from 6 to 25 feet in length, while the crates vary from the small size used in handling bays up to the large form employed in shipping well grown conifers.



An Interior of the Sheds, showing the Tops of a few of the Cases and Bales.

representative of the NATIONAL NURSERYMAN recently visited the docks of the North River, New York City, and Hoboken, N. J. Some first hand knowledge regarding existing conditions was desired. He found that two vessels had arrived during the fore part of the week, each carrying a cargo approximating two thousand packages, including cases, bales and crates. No one except the person who is thoroughly familiar with the plant import business realizes the diversity and extent of the quality and character of goods which come into this great metropolis. These cases and bales in which nursery goods are packed vary greatly in size and weight. One sees all kinds and weights running from 200 or 300 pounds each up to 1500 and even 2000

The docks are packed with these bales, boxes, and barrels of produce and merchandise of all descriptions. Aside from the appraiser's stores there are no storage houses as such, merely open sheds, which during times of heavy receipts in imports are congested to such an extent that they are quite incapable of accommodating the great mass of arriving merchandise. Under these circumstances the nursery stock, whether in bale or bundle, takes its chances with the rest and must run the gauntlet of weather conditions, good or bad. When the sheds are overtaxed, the surplus is packed in streets about the docks in the most convenient place, and are covered with tarpaulins which give some slight protection from rain and snow.



Holland American Line Dock, Hoboken, N. J., showing Interior with Hundreds of Cases of Plants which arrived per Ss. Ryndam.

PASSING THE CUSTOMS.

The method of passing the Customs is orderly and systematic. The duty of the importer is first to make entry in the Custom House and pay the duty on the basis of the invoice. This secures him a permit certifying to the payment of the duty. He then takes the permit to the Custom House Inspector on the dock. At the same time the Custom House officials send the invoice to the Appraisers Stores where an examination slip is issued and passed to the examining officer. This provides for an examination of a sufficient number of sample cases to satisfy Customs requirements. The examining officer takes care to compare the slip with the invoice of the goods and uses this as the basis of his examination of the stock itself. If it conforms in specifications to the invoice the permit is signed by the examiner and the shipment is released to the importer.

Shipments come under different numbers and marks. In the unloading of these, and owing to lack of space, it is impossible to group them under the receiver's marks, so that the clearing house clerk must assemble his cases, and in doing this may find them in various places on the dock. After collecting them and arranging for their transfer to their various destinations, the cases are all carefully checked up before they are passed over to the next transporting agency. All this takes time and consumes much space.

The visitor is very much impressed with the amount of work in progress and the small amount of space available for carrying it on.

HANDLING THE CASES

In order to economize space, the plant cases which are usually oblong in form, varying from 5 to 15 or more feet in length, and having ends which are approximately 9 feet square, are placed on end. When these are handled, owing to their great weight they require the combined efforts of from four to eight men to place them upon trucks for removal from the docks. To illustrate the amount of floor space required we may sight the condition following the arrival of the S. S. Sommalsdyk which reached New York on March the 15th, carrying 1720 cases of trees and plants. It is estimated that these cases when standing on end on the floor occupied some 15,480 square feet. During the height of the season five or six steamers may arrive each week carrying from 1500 to 2000 cases. These would approximate about 9,000,000

pounds in weight and when stored in the minimum amount of space which they would occupy, would require 81,000 square feet of floor space.

DOCK INSPECTION IMPOSSIBLE

In order to show how impracticable dock inspection would be, we have simply to realize the space required were



Holland American Line Dock. Interior View showing other Enormous Quantities of Cases of Plants that arrived per Ss. Ryndam, March 17, 1910. This steamer carried over 2000 packages of plants.

we to open and inspect these cases at the moment of their arrival. Each case would occupy at least three times the amount of floor space which would be required to store it, and to this space should be added one-half more to accommodate the inspector and allow him to get at the contents of the case. When viewed from this standpoint, the impossibility of handling the goods is at once realized. It is absolutely and completely out of the question—practically impossible. On the other hand, were the space difficulty removed the other difficulties which are equally important, remain. In the first place, in order to ensure absolute freedom from insects every case and every bundle of stock would have to be examined with great scrutiny. This would mean taking out all the stock, separating it, and then repacking it. Here would come the great difficulty, for the foreign exporter is an adept in the manner of packing to economize space, and very few cases could be made to receive the amount of stock which had been pressed into them by the ingenuity and appliances used by the foreign packer.

Another important difficulty, if not an absolute bar in itself to the introduction of dock inspection, is the time factor. Nursery stock is perishable and every day's delay in transit lowers its vitality and lessens its value. It will stand considerable delay and considerable vicissitude in the matter of climatic variation when in the original package, but when opened and allowed to become partly dry it is very susceptible to injury. The importer, therefore, is most insistent that the stock should pass from the steamer to the consignee with the least possible delay.



Nursery Stock first received from Holland stacked outside Storage Sheds, North River, New York



Showing Size of Cases of Plants from 6 feet to 20 feet in height and weighing from 600 to 1500 pounds each.

It has been suggested that a special examining warehouse might be provided for nursery stock. This might meet the requirements were the only factor considered that of a question of Customs valuation, but an inspection for insect infestation is an entirely different matter, and we are thoroughly convinced that no facilities, however complete and expensive, would enable adequate inspection at the dock without necessarily injuring, and destroying in some cases, large quantities of valuable trees and plants.

CONCLUSION

Summing up then, it would seem a fair proposition to say that dock inspection is out of the question for the following reasons:

1. Lack of space.
2. Unfavorable storing conditions.
3. Method of packing the goods.
4. Amount of time required to make the examination under existing conditions.
5. Injury and destruction of nursery stock under the most favorable method conceivable of conducting such an examination.

The pictures which accompany this article give an inadequate idea of conditions, owing to the fact that time did not permit the photographer to study the situation to the end that properly descriptive illustrations might be secured.

THE DENVER MEETING

ARRANGEMENTS ACTIVELY IN PROGRESS. THE PROMISE OF A PROGRAM OF GREAT INTEREST



An Overflow Pile of Bales outside of Warehouse, Hoboken, N. J. Unfortunately this view does not show the height nor the extent of the pile.

OUTLINE OF PROGRAM

Chairman Hill of the Program Committee, writes that the aim of this committee will be to center discussion on three or four important topics of vital interest to nurserymen at the present time. Among these topics nothing is of greater moment to the nurserymen of all parts of the country than the status of the various knots and galls affecting the roots of nursery trees. This then will be one of the themes which will be discussed by nurserymen and investigators. Certain nurserymen have been studying this by the demonstrative method for a number of years, and they have secured results which are from the standpoint of experience very valuable. Then the pathologist has been boring into the life history and attempting to secure definite data regarding the identity of apparently different forms, and he will be ready to report. At these joint presentations very valuable information should be derived. It is hoped that Dr. Erwin F. Smith of the Bureau of Plant Pathology, Washington, will present the pathologist's side, while the experience of the nurseryman will be given by representatives of the Jewell Nursery Company and of the Arlington Nurseries in Nebraska, and possibly others in the Middle West.

INSECT LEGISLATION

This ever present and increasingly important subject will be up for discussion, and Chairman Hill is making a strong

effort to secure the presence of the United States Entomologist, Dr. L. O. Howard, who has been active in outlining measures for the control of injurious foreign insects. He is being strongly urged to attend, and his presence is confidently expected. It is exceedingly important that nurserymen and officers of administrative departments should come close together on a subject of this kind, and that a clear understanding of the importance and gravity of the situation should be presented.

REPLACEMENT AND SUBSTITUTION

Many other important subjects will be up for discussion, such as the above. There are a variety of views held upon this question, and more unity of action is desirable. Other subjects which may be presented, are, Observations on European Nursery Methods, illustrated by lantern slides, by Professor Craig and members of the Association who have visited European nurseries in recent times.

PROGRAM ANNUAL MEETING

Writing on March 11, Mr. Hill says: "I have the consent of leading nurserymen to present papers on the following subjects: "

"Is the organization known as American Association of Nurserymen, a benefit to the nursery business?"

"Should a young man choose the nursery business for a vocation?"

"A practical experiment with crown gall on apple trees."

"Root knot and its effect on orchard trees."

"Transplanted raspberries for the retail trade."

"Varieties."



The Congested Condition of the Docks. There are thousands of packages of merchandise other than nursery shipments.

"Observations upon European nurseries and their plant growing methods." (Illustrated with lantern slides).

I hope to complete program for your May issue.

WORK OF COMMITTEES

LEGISLATION

Inspection of Imports.—Referring to the proposed import inspection statute, Mr. Pitkin, who is Generalissimo of the nurserymen forces, in connection with correspondent matters in reference to this bill, writes on March 8th that correspondence with the office of the U. S. Entomologist, Dr Howard, is continuing but "as yet we have not harmonized our differences, and at the present writing I cannot add anything to my last report which was published in January. My understanding is that the bill introduced by Mr. Simmons will have no general backing, and will be either withdrawn or allowed to die a natural death." The representatives of the nurserymen in this matter insist that inspection of fruit stocks and other nursery plant imports at the customs warehouses in New York is practically impossible, and they are undoubtedly absolutely right in their contention.

It is now proposed that all nursery imports shall be inspected at the point of destination except bundles containing less than 1000 plants or trees. It is thought that relatively small packages of this kind can be inspected in the customs warehouses.

TARIFF

Chairman Irving Rouse says that there is "nothing new in tariff matters except that the government has collected duty on evergreen seedlings which they had explicitly placed on the free list. This duty has been paid in most cases under protest, and while I have no doubt that the money will be eventually returned it exemplifies the peculiarity of



Boxes, Bales and Crates arrive in Great Quantity.

the government's custom methods in dealing with tariff matters."

EXECUTIVE

Chairman J. H. Dayton writes that nothing specific in regard to the forthcoming meeting has been presented to his committee as yet. "All convention matters are being handled by the various committees, and no doubt in a very satisfactory manner."

TRANSPORTATION COMMITTEE

The Transportation Committee will cover: (a) The advantage of keeping a representative at Western Classification Meetings; (b) Keeping in touch with the Uniform Classification Committee; (c) Reduction secured in less than carload rates to points in California, Oregon and Nevada; (d) One or two other matters of minor importance.

W. P. STARK, Chairman.

EXHIBITS COMMITTEE

Chairman Bernardin writes that he is working for an exhibit of fruit from Western growers, in addition to the usual exhibit of implements, machinery, plants, etc. He is



Nursery Stock being transferred to Railway from Dock in New York.

not certain at the present moment that such an exhibit will be possible, but the growers are interested and will co-operate in every way possible.

The exhibits will probably be shown in a room in the Brown Palace, which will accommodate all the lighter exhibits. The space for the heavy exhibits will be secured as convenient and commodious as possible. The space at present secured amounts to 1000 sq. ft., and will probably accommodate very satisfactorily the usual line of exhibits. Mr. Bernardin will issue a circular letter to manufacturers and those interested in making exhibits of stock and supplies. He is confident that an exhibit quite up to the usual standard will be forthcoming which will be highly educational and instructive.

Louis, and they have also promised that if we could make up 5 cars at St. Louis, they would give us a special train to follow their limited, which leaves St. Louis at 2:15 P. M., daily, arriving at Denver the following afternoon at 4:05. Our train being about 30 minutes later, would land us there about 4:35 to 4:40 P. M., in ample time to get located for the night.

The Burlington Route has also promised us that they would place a car at Chicago, in which nurserymen could make reservations, and could pick up nurserymen through Northern Illinois, Iowa, and Eastern Nebraska, meeting our train at Oxfords Junction on the following morning after we leave St. Louis. I think it possible that the Texas, Arkansas, Eastern Kansas, and South Eastern Nebraska nursery-



Patching a Broken Case. No protection against sun or wind.

ENTERTAINMENT COMMITTEE

Mr. Youngers, Geneva, Nebr., Mr. Ferguson and Mr. Fravert of Denver, and myself met in Denver, on Feb. 17, and arranged for the following entertainment. First afternoon, which will be on the 8th, the ladies will be taken upon a sightseeing trip through the city of Denver, and surrounding points of interest. On the second afternoon, the 9th, the ladies will be given either a matinee trip, or will be taken to the park or summer garden for an entertainment. On the 10th, the entertainment committee has arranged for a complimentary trip to all nurserymen, their wives, daughters, and sons, over the Moffat route, which is said to be the finest scenic trip out of Denver. Luncheon and refreshments will be served to all making this trip, and it is hoped all the attending members will take advantage of this trip.

The committee is considering other entertainment features, which will be announced later. It may also be possible, that is if enough members care to remain over for the 11th, that another side trip will be arranged for. I have written Mr. Yates regarding the probable railroad arrangements that can be made. I believe that the Burlington Route can give us the best and quickest service out of St.

men will arrange to make up a car or two at Kansas City, and St. Joseph, and connect with our train in the evening. If this arrangement can be made we will have the advantage of all being together for a daylight run through the western part of Nebraska and Eastern Colorado. I should think this would be a very nice way to travel, and should be entertaining to all.

F. A. WEBER,

Chairman Entertainment Committee.

HEADQUARTERS AT DENVER

Secretary John Hall announces that the Brown Palace Hotel has been selected as the headquarters for the annual convention to be held in Denver in June. This hotel is one of the most modern in that city, being fire-proof and thoroughly equipped and appointed. It is located in the heart of the city.

MAKE RESERVATION

Avoid disappointment and make your hotel reservation for the convention at an early date.



FRANK A. WEBER,
Chairman of Arrangements Committee.

HEADQUARTERS FOR THE CONVENTION

In order to secure the best, not only Secretary John Hall, but Messrs. F. A. Weber, chairman of Entertainment Committee, and Mr. Peter Youngers, a member of the same committee, have made persistent effort. These latter gentlemen, with Mr. A. M. Ferguson of Denver, visited the various hotels, finally selecting the Brown Palace as the one best suited to the requirements of our Convention.

The Brown Palace is an up-to-date, fire-proof building, and has the usual restaurants, cafes, and other appointments of a first-class hostelry. In submitting the tariff, the manager assures us that every endeavor will be made to see "that everyone in attendance upon your Convention is pleased, not only when they come, but when they settle their bills and leave." That sounds assuring.

MEMBERSHIP

To join the American Association of Nurserymen costs Five Dollars. Send that amount to the Secretary, John Hall, 204 Granite Bldg., Rochester, N. Y.

THE BADGE BOOK

In answer to the query—"What is it?" it is styled as "an unique list of the live nurserymen of the country." Not that all the live members of the trade are enrolled. Every member is given a number immediately his fee is received by the secretary, and his name will appear in the Badge Book. If he be alive to his privilege he will buy a space in the book for his advertisement, thereby arresting to himself the attention of every other member, for his badge contains his registration number, which he will attach to his coat and thus introduce himself to all who meet him at the Convention. You cannot afford to be off the list of advertisers. Primarily, for your own good, and next because this is a grand co-operative concern and deserves the support of all to enable it to successfully prosecute its work.

THE EXHIBITS

For information under this head application should be made without delay to Mr. E. P. Bernardin, Parsons, Kans.,

Chairman of Committee on Exhibits. Intending exhibitors should write him now.

ADVERTISING

Advertising in the Badge Book is a privilege extended to members only. The membership fee entitles you to publication of name and address only. Rates for advertising will be found on blank herewith. If you order advertising with membership, send copy with order, as you cannot be assigned a number until space taken is known. If you order advertising and say copy will follow you get a later number than otherwise. Make name and copy clear. This will help to avoid mistakes.

RAILROAD ARRANGEMENTS

Application has been made to the various Passenger Associations for the usual reduced rates on the certificate plan, but up to this date no definite arrangement has been made. It is sure to be done, however.

PROGRAM

We are advised by Mr. J. W. Hill, chairman of Committee on Program, that the following gentlemen will appear on the program of the Denver Convention:

E. S. Osborne, Rochester, N. Y.
Jas. M. Irvine, St. Joseph, Mo.
Professor C. P. Gillette, Fort Collins Colo.
Professor W. L. Howard, Columbia, Mo.
Vice-President E. A. Smith, Lake City, Minn.
W. N. Scarff, New Carlisle, O.
A. Willis, Ottawa, Kan.
Professor John Craig, Ithaca, N. Y.
A. B. Morey, Dansville, N. Y.
C. S. Harrison, York, Neb.
E. W. Kirkpatrick, McKinney, Texas.
W. H. Stark, Louisiana, Mo.
H. W. Marshall, Arlington, Neb.
George H. Whiting, Yankton, So. Dak.
J. R. Mayhew, Waxahachie, Texas.
Professor E. P. Taylor, Columbia, Mo.
Peter Youngers, Geneva, Neb.
E. M. Sherman, Charles City, Iowa.

RAILROAD ARRANGEMENTS TO DENVER

Nurserymen have been unable to secure the customary reduced rates, but Secretary John Hall is in receipt of the following from the Chairman of the Western Passenger Association: "This question has been given careful consideration, and on behalf of the individual lines interested would respectfully refer you to Summer Tourist Rate fares that will be in effect to Denver, Colorado Springs, and Pueblo, this year, and which will be available to your Convention. The Summer Tourist Fares referred to are on the basis of \$30.00 from Chicago, \$26.75 from Peoria, \$25.00 from St. Louis, \$17.50 from Missouri River points, and proportionate fares will be in effect from intermediate points. Tickets will be on sale from June 1st with a return limit of October 31st, 1910."

This we regard as probably a more advantageous arrangement than that afforded by the certificate plan inasmuch as members will not be compelled to return at once to their homes from Denver.

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The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States, Canada and Europe.

Official Journal of American Association of Nurserymen.

AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

SUBSCRIPTION RATES.

One year, in advance,	\$1.00
Six months,75
Foreign Subscriptions, in advance,	1.50
Six months,	1.00

Advertising rates will be sent upon application. Advertisements should reach this office by the 20th of the month previous to the date of issue.

Payment in advance required for foreign advertisements. Drafts on New York or postal orders, instead of checks, are requested by the Business Manager, Rochester, N. Y.

Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

Address Editor, Ithaca N. Y.

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ROCHESTER, N. Y., APRIL, 1910.

AMERICAN ASSOCIATION OF NURSERYMEN.

President—F. H. Stannard, President of F. H. Stannard & Co., Ottawa, Kas; vice president, W. P. Stark, Louisiana, Mo.; secretary, John Hall, Rochester N. Y.; treasurer, C. L. Yates, Rochester, N. Y.
Executive Committee—J. H. Dayton, Painesville, O.; E. M. Sherman, Charles City Ia.; H. B. Chase, Huntsville, Ala.
Transportation—W. P. Stark, Louisiana, Mo.
Tariff—Irving Rouse, Rochester, N. Y.
Legislation—Chas. J. Brown, Rochester, N. Y.
Co-operation with Entomologists—Orlando Harrison, Berlin, Md.
Program—J. W. Hill, Des Moines, Iowa
Publicity—John Craig, Ithaca, N. Y.
Exhibits—E. P. Bernardin, Parsons, Kans.
Arrangements—John Hall, Rochester, N. Y.
Editing Report—John Hall, Rochester, N. Y.
Entertainment—Frank A. Weber, Nursery, Mo.
Forestry—C. M. Hobbs, Bridgeport, Ind.
National Council of Horticulture—C. L. Watrous, Des Moines, Iowa.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckmans, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.
American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.
Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.
Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.
Connecticut Nurserymen's Association—President, John S. Barnes, Yaleville; secretary, Frank E. Conine, Stratford.
Eastern Association of Nurserymen—President, W. C. Barry, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.
National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary, F. E. Grover, Rochester, N. Y.
National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O.; secretary, W. B. Cole, Painesville, O.
Pacific Coast Association of Nurserymen—President, C. Malmo, Seattle, Wash.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.
Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa.; secretary, Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga.; secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President, J. C. Hale, Winchester, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

PLANT BREEDING

At a recent meeting of the American Breeders' Association, Mr. W. W. Tracy, chairman of the committee on breeding vegetables, presented an interesting report. In this he stated that among the urgent needs in the field of vegetable breeding were, first, more full, accurate and comparable discussions of varieties coupled with their specific uses, and second, the establishment of "some generally accepted tribunal which shall decide upon the varietal name by which each distinct and useful variation shall be known, and whose decision shall be accepted and adhered to in practice by both seedsmen and plantsmen."

Mr. Tracy recommended that a committee of the Market Gardeners' Association, seedsmen, with representatives of the Experiment Stations, be organized to work out such a scheme. This movement is to be commended, whether the plan of organization is feasible or not. We are inclined to doubt the feasibility of the scheme recommended. It does not seem to us that any committee of this kind, established in this way, is likely to be effective. Such body to have authority, and have its authority respected, should be under governmental appointment. This would insure continuance and constancy in regard to management, both features of great importance in a work of this kind.

NATIVE PLANTS

We were glad in a late issue to present to our readers a sketch of the activities of a nursery establishment devoted primarily to the popularization of American plants. This is a worthy mission. We have no unreasoning prejudice against foreign plants, but we have unbounded faith in the variety, beauty and usefulness of our own flora. While taking the best the world has to offer in the way of plant production, let us get over the idea that merely because a thing is a native it is not worth while, or on the other hand, because it happens to be foreign and rare that it is to be highly prized.

We have received a number of valuable things from Europe. Witness the handsome Norway maple and a number of fine conifers. But we have also to thank Europe for the codling moth, gipsy moth, brown tail moth and currant worm. We have received a number of valuable plants from the Orient, as the hardy hydrangea, Asiatic barbery, and the vigorous oriental plums. But we have to debit the same region with San Jose scale and many other pernicious scales. Just now we are endeavoring to shut out the dangerous brown tail moth and the blister rust of the pine which are coming to us in importations from Europe.

We need a healthy sentiment making for the development of a stronger appreciation of the worthy native plants, plants which we can set out without considering the necessity of testing their adaptability and without the fear of introducing dangerous parasites.

A CORRECTION

THE SIMMONS INSPECTION BILL.

On page 519 reference was made to this bill, but the name was misspelled and appeared "Symons" instead of

"Simmons." The Secretary of the Association of Horticultural Inspectors, Professor Symons, calls our attention to the error, which we very gladly correct.

Under this head various people discuss various things. At the present time it is a subject of the keenest interest to nurserymen, for the tree man, without reference to his location, be he in the North or

ROOT GALLS

South, is getting "stung" on the root knot, root gall, hairy root, crown gall question. These root affections are certainly causing a great deal of trouble between planter and nurseryman, and there seems to be considerable amount of haziness on the part of the investigator, as well as the grower, as to the true character and pathological status of these warty outgrowths. Root knots have been the subject of study by experimental officials for a good many years, and the U. S. Department of Agriculture detailed a man to this subject some five or six years ago. It may be said that results which have accrued from this latter investigation are largely of a negative character. We are informed that subsequent investigations by the Division of Pathology of the Bureau of Plant Industry at Washington, have been more fertile of definite results, and it is expected that a bulletin will be published shortly which will throw new light on the subject.

In the meantime the opinion is gaining ground that many trees affected to a greater or less extent by these root excrescences have been unnecessarily destroyed, and growers are coming to hold the opinion that the northern forms at any rate are not nearly so injurious and pernicious as inspectors are wont to make planters believe. Certain tests which have been made by nurserymen tend to support this view. Nurserymen are, therefore, anxiously awaiting the publication of the bulletin referred to, and we are wondering why this whole subject of root troubles should not receive a thorough discussion by the best authority available at the next meeting of the Association in Denver.

Up to the present time, then, nothing very definite or conclusive has resulted from these investigations, although we are promised something definite from the researches of Dr. Erwin F. Smith of Washington. This matter has been prepared for publication in the departmental report, and according to the custom of the Department the results must not be divulged before they are given to all of the people in the forthcoming publication. We are very sanguine that these experiments will bring a ray of hope to the much tried nurserymen.

Nurserymen have certainly been sufficiently harassed by the erratic action of more or less responsible inspectors who insist on destruction or quarantine of trees exhibiting various types of infestation. Caution is a desirable characteristic, and conservatism is good, but both of these may be overdone. While pathologists have been trying to discover the life history of the agents causing these warty growths, some of the nurserymen themselves have been trying stunts which have now progressed sufficiently far to talk about results. Various demonstrative experiments have been started in different parts of the country with a view of showing the

actual behavior of these root knotted trees under orchard conditions. These experiments are to be described at the forthcoming convention. It may be that common experience developed out of the field test may not jibe with laboratory results. If that should happen we are inclined to think that it would be so much the worse for the laboratory trial. At all events the various reports on these field tests will be looked forward to with the keenest interest.

PUBLICITY SERVICE

The American Association of Nurserymen maintains a committee on publicity. The supposed duty of this committee is to give appropriate publicity to the affairs of the Association, such affairs at any rate as should be exploited before its members and the general public. This committee has no definite instructions, no specific authority, and no funds. It stands as a free lance in relation to the Association. As a consequence of its peculiar position it has been scantily recognized, and very justly, because it has done little or nothing to advance the purposes of the organization and the mission of nurserymen generally. It has been a more or less ornamental and useful appendage, its title sounding rather well, but standing for little or nothing.

The question arises, is there a place for a live committee on publicity, one authorized to look after the interests of the Association, in some such way as is well illustrated by the service of the tariff and legislative committees? We are wondering why should not such a committee be used to stimulate public interest in planting fruits and planting certain types of ornamentals. Why not urge the extension of this or that class of fruit in certain sections, giving as arguments the experience of successful orchardists in the particular section? There is large opportunity in our judgment for a propagandist movement of this kind. A correspondent pointedly remarks in a recent letter that "money could be well expended in exploiting the subject of ornamentals, and right now cherry growing is a topic which could be very profitably emphasized. Too few cherries are grown. It is a case of under-consumption rather than over-stocking," and the writer proceeds to remark further, that "the right kind of a publicity service could spend a few thousand dollars very advantageously for the common good." Is not this a subject which might be very appropriately considered at the forthcoming convention?

INSPECTION OF IMPORT NURSERY STOCK

The Simmons Bill, introduced into Congress some time ago, which was practically a duplicate of that introduced by Representative Scott last year, providing for the inspection of all nursery stock at port of entry, which was reported to have been withdrawn, is still pending but will probably be a dead letter. This is due to the energetic action of nurserymen who showed the absolute impracticability of such a bill.

The nurserymen are in accord with the principle of inspection of imported nursery stock, but they wish to have the bill provided for such inspection put in such form as will obviate the certain destruction of their stock in the process of inspection.

THE TREND OF APPLE GROWING IN NEW YORK

By John Craig

It is very probable that more apple orchards have been planted in Western New York since 1906 than were planted during any other decade since the noted era of commercial planting which occurred in the Lake Region some forty or fifty years ago. During that time when the commercial orchards, now turning out the thousands of barrels comprising the great bulk of Western New York production, were planted they were fortunately confined to a comparatively small number of varieties. Two varieties composed the bulk of the kinds which were set. These varieties were Baldwin and Greening. Others relatively popular and following somewhat in order of popularity were: Spy, King, Russet, Twenty Ounce and Spitzenberg, and a strong sprinkling of a dozen or more additional kinds.

In the revival of interest in orcharding several notable changes in system of planting, system of management, and the varieties planted, are apparent.

1. The filler, or double planting system, has come into vogue and represents a new ideal making for more intensive culture. As is well known, the permanent trees are planted forty to forty-five feet apart and fillers interplanted in the proportion of two to one of the permanent trees. Of course there are many modifications of this plan, based upon personal views of the planter and character of stock set out. The underlying principle is to use the fillers as a means of hastening the revenue bearing period of the orchard and paying in a fuller manner for the cost of producing the trees during the early unproductive period of the orchard. This is undoubtedly a good system and is successful in so far as the manager carries out his original scheme. It requires business ability and considerable determination.

2. In managing the orchard, and under this head the questions of soil tillage, tree pruning and tree spraying, are to be considered, the practice of the present day, up-to-date orchardist does not countenance the cropping of the orchard with such crops as hay or grain, but appreciates the principle that the orchard trees are in themselves a sufficient crop into the soil. Culture may be given in various ways, by mulching the soil—as a rule an expensive way—by tilling it clean during the fore part of the season, or a type of culture can be given by growing sod in the orchard and maintaining a sward rather than a meadow. Feeding can be done through the sod, or in the clean tillage method by green manuring through cover crops with the addition of commercial or stable fertilizers. The main point is that the grower realizes the necessity of handling the orchard as a crop in itself. It has been difficult for the Eastern grower to break away from the old-fashioned traditions which have clustered around the homestead orchard, long uncared for, to the new practice of tilling, feeding and caring for the fruit tree as a definite and specific farm crop.

3. As change has occurred in the matter of systems of planting and systems of orchard management, so changes have also taken place in reference to the varieties set out.

Among the many mistakes of the past, and mistakes which are in some sections being repeated at the present time, was that of planting too many varieties. The noted orchards of the country at the present time are those in which the number of varieties has been cut down to a minimum. Large changes have occurred in recent times. It is not a question of fashion but a question of economics. Returns are demanded in the shortest possible time. In order to secure these, early maturing varieties are essential, for it is generally known that such types are relatively precocious. It follows then that the winter kinds are those which are set in to occupy the ground permanently and that the earlier kinds are those set for quick production and temporary possession.

I have been wondering whether we have been overplanting such varieties as Duchess, Wealthy and Alexander. Their prolificacy has increased their popularity, but certain weak points have perhaps been overlooked. They are all cold storage varieties. Is it not possible that we shall have too many autumn varieties when these extensive plantings come into bearing? I am inclined to think that such will be the case with Duchess and Alexander. They are both low in quality, though handsome in appearance. Alexander, too, in its susceptibility to blight, introduces a new danger.

Other varieties which have in my judgment received too much attention in Western New York in recent years are Rome Beauty and York Imperial. I am doubtful regarding the ultimate success of these two apples for the reason that they come from a region in which the summer heat is greater than that of the Lake Region of New York. I am inclined to think they are out of their latitude. I believe that McIntosh is a much safer variety to plant. It is of the highest quality, a comparatively early bearer, approximates annual bearing in its habits, is handsome and hardy. It can be used either as a filler or as a permanent tree. In addition to this I would use King and Spitzenberg. The quality of these two varieties as grown in Western New York is unsurpassed in the United States.

Then, of course, we should not overlook our standard Baldwin and Greening. In propagating these more attention should be given to the propagation of select types. Any person of experience knows that there are certain well defined types of these, differing in form, coloring, and to some extent in quality. The perpetuation of the most desirable types is an exceedingly important line of work, either scientifically or commercially. In the northern part of the state where Spy takes on such magnificent size and beautiful coloring we can afford to wait for this fine variety to come into bearing; in other words, we can afford to plant it. In my judgment the Eastern planter must bank on quality, cutting down on number of varieties and concentrating on better methods of intensive tillage, and above all practicing the most approved methods of handling with reference to a uniform honest grade and an attractive package.

THE RELATION OF HORTICULTURE TO THE SCHOOLS OF THE STATE

By L. C. Corbett, United States Dept. Agr.

I will not take time to dwell on the well known and well worn adage that our age is an industrial one. That it is such is apparent to any one who looks about him. It follows of necessity that our educational system should to some extent be industrial. Indeed, such is the trend of education. Education is becoming more and more a question of local expediency. That training is best which teaches the child to know and do well those things, which by reason of its environment, it were best to know and do. Thus it comes that trade schools are established in manufacturing districts, mining schools in mining localities and agricultural schools in farming sections, all of which has some little to do with the "Relation of Horticulture to the Schools of the State."

It is a source of much encouragement to know that Alabama is falling in line with the most approved methods of training her youth. She was rather late in making a start, perhaps, in the proper direction. We might pause to ask what is the proper direction. Naturally it would be in that way which would lead to the development of her own resources, and especially those resources which would add most to the welfare of her people. It is easy to figure what this it, because more than eighty out of one hundred people in this state are dependent upon the soil for their support. Thus, the industrial education of Alabama must be concerned for the most part with the soil and the products thereof. This means that our children should be taught the principles of agriculture and horticulture. A very good beginning has been made. This beginning is represented by the state college at Auburn, by the nine district agricultural schools, and by the introduction of agriculture into the common schools four years ago. You will notice that the provisions already made for education in this line have been made for agriculture without any special reference to horticulture, except at the Auburn school and the nine district high schools. What needs to be impressed upon the educators and the people generally is the fact that horticulture in this state is just as important as agriculture, and furthermore, that both of these industries deserve more aid and encouragement in the school than they are receiving. Of course the two are very closely related so far as the teaching of the general principles of plant study is concerned. The book used in the public school has just as much horticulture as agriculture, so when a dollar is spent for agricultural training horticulture profits by it just as much. Let us consider briefly a few observations on the present status of education as it pertains to agriculture and horticulture. To begin with there is a crying need for more funds for purely horticultural work at Auburn and for experimental purposes at the nine district schools. This is seen by the reports of those in charge of the work at those institutions. It is to be hoped that those schools receive sufficient funds

for I believe that they are doing a most worthy work.

But I wish to call your attention to what I consider a far more important matter just at this time. This is the question of agriculture and horticulture in the common schools. I learn from your records that this society was organized five years ago and that its purpose is "the dissemination of horticultural knowledge." The greatest opportunity for disseminating such knowledge is in the public schools of the state. And it devolves upon us, gentlemen of this society, as a bounden duty to do all in our power for the cause of this question. Let us not be inclined to think that all that was necessary was done when the law was passed putting Agriculture as a study in the public schools. Indeed, this was just the first step and the way is long. The law lacks much of covering the whole field of education. Only one child in five has access to a secondary school. Some provision by law should be made to give the other four children some of the principles of plant study. In the primary grades the bent of the child is moulded. It might wisely be argued that the present book in agriculture is too difficult for the work of the primary grades. Such is the case, but here is where the work should be started. Every primary teacher should be provided with a good book in nature study (there are numbers of such books). The simple principles of plant life could easily be instilled into the minds of the children. Then when the higher grades are reached the student can grasp intelligently the broader principles of agriculture and horticulture.

As has been stated one child in five attends a school where the book in agriculture and horticulture is taught. And I grant readily that if one child in five were really taught the principles of this book in an intelligent and effective way that our educational training in this line of work would be entirely adequate. I can assure you with a great deal of confidence that this proportion of the school children are not getting the principles of horticulture. It is evident that this book is not being taught as well as it should by any means. I make this statement conservatively, and only after sufficient observation and investigation to know that it is true. On this point allow me to quote you a sentence from a letter received from the state superintendent of education last week, who says, "My information and observation lead me to believe that the work being done along agricultural lines in the rural schools of Alabama amounts to almost nothing." So far as I can find out this seems to be the opinion of educators generally. I beg of you, gentlemen of this society, hear me when I say, it is time somebody were waking up about this question. Here are over four hundred schools in the state where the principles of plant study are supposed to be taught, and yet at the end of four years that amounts to very little. There is no reason for such to be the case. Something should be done for improvement.

Doings of Societies

THE MIAMI VALLEY NURSERYMEN'S ASSOCIATION

The regular annual meeting of the Miami Valley Nurserymen's Association was held at the Phillips House, Dayton, Wednesday, February 16. The large nursery interests of the Valley, were, as usual, well represented. The nurserymen were generally accompanied by their wives, who formed a matinee party in the afternoon, and attended the theatre while the business session of the Association was held at the hotel.

The usual reports of the condition of growing and stored stock was an interesting feature of the program, and without exception the reports were satisfactory.

Discussion of various matters pertaining to the nursery business occupied the time fully, until six o'clock, when the banquet hall was thrown open, and the nurserymen, with their wives and friends, surrounded the festal board, elaborately decorated with the flowers that are induced to bloom in the winter, while the sweet strains of the orchestra filled the air. After the menu was disposed of, Mrs. T. J. Dinsmore, the talented wife of the president, together with a local celebrity, entertained the company with a number of selections. The eventful occasion closed with remarks by president elect Siebenthaler, Inspector Shaw, who was the guest of honor, J. W. McNary, and others.

The officers for the ensuing year elected at the business meeting are: John Siebenthaler, president; Fletcher Bohlender, vice-president; M. A. Gaines, secretary and treasurer. These with M. F. Barnes, S. R. Fergus and J. W. McNary form the executive committee.

ROCHESTER FLORISTS ENJOY ANNUAL DINNER

The annual dinner of the Rochester Florists' Association was held in the Powers Hotel, Rochester, on the evening of March 14th. At this pleasant function the members of the executive committee of the Society of American Florists were present as invited guests. These men were in Rochester, however, primarily on behalf of the forthcoming meeting of the National Florists Association, which is it purposed to hold in Rochester, August, 1910.

The dinner was a great success. The toast list was presided over by Eddy Osborne, the well known Rochester nurseryman, and included a goodly list of speakers, among whom were W. C. Barry, W. H. Vick, W. N. Rudd, H. B. Dorner, J. A. Valentine, F. R. Pierson, and Professors Judson and Craig of Cornell. In addition to the nurserymen on the toast list a considerable number attended the banquet.

Resolutions were passed by both the Rochester florists, and the executive committee of the national society, urging the passage of a bill by the New York State Legislature, setting aside a sum of money for the construction of glass houses at Cornell, to be devoted exclusively to research in floriculture. This bill was introduced a short time since, and is receiving the enthusiastic support of the florists of Buffalo, Rochester and New York City.

NATIONAL CANNERS' ASSOCIATION

That the canning industry of the country has its difficulties to face and problems to solve was evidenced by the papers and discussions at the third annual meeting of the National Canners' Association in Atlantic City, N. J., February 8 to 11.

The canners are united in their purpose to establish a legalized system of standards for canned goods. They are agreed that a scramble for business has resulted in making the merits of the product proportionate to the price, but affirm that "slack" packing rather than inferior quality has brought the product into disrepute from many sources. Federal inspection of canning plants is also favored as a means of bringing the industry to its proper standing, by compelling the packing of better goods or putting the bad canner out of business.

A publicity campaign is to be instituted, with a fund of \$100,000.00, for increasing the consumption of canned goods. The canners state that the industry has been much maligned and injured through the publishing by newspapers and magazines of sensational stories of ptomaine poisoning not founded on fact. The publicity campaign aims to establish the canners in the confidence of the public.

Resolutions were adopted by the Association which aim to secure remedial legislation regarding statutory labor prohibitions against women and minors, in so far as they relate to the canning industry, on the grounds that the short season for canning perishable vegetables and the nature of the work render the labor not comparable with ordinary factory labor.

Resolutions were also drawn up by the canners favoring the establishment of a parcels post.

CALIFORNIA DECIDUOUS FRUIT GROWERS ORGANIZE

At the mass meeting of the California deciduous fruit growers, packers and shippers in Sacramento, January 28th, there was brought into existence the California Deciduous Fruit Protective League. This newly born organization plans in general to work along the lines of the Citrus Protective League in Southern California, for the handling of matters of mutual concern, as freight rate charges, distribution, packing and inspection. Packers and shippers of deciduous fruits, as well as handlers of dried and canned fruits are eligible to membership.

Much earnestness was shown and an auspicious beginning made by the association. The future of the league will, however, depend upon whether the growers themselves apply for membership in sufficient numbers to warrant the organization going ahead and producing an effectual outcome.

"Enclosed find our check for \$1.00 to renew our subscription to your paper which we find indispensable to our happiness and profit."

THE WEDGE NURSERY, Albert Lea, Minn.

"Best wishes to your grand paper. I could not run without it."

R. F. SPURLIN, Amity, Ark.

Note and Comment

SUBSTITUTION FROM THE STANDPOINT OF THE NURSERYMAN

"Having spent all my life in the nursery business until four years ago, serving as an apprentice, foreman, superintendent and partner, I feel qualified to speak a word for the nurserymen," says E. S. Black in *The Rural New Yorker*. "The seedsmen and nurserymen are only human beings, therefore cannot be held more responsible for their failures than the trucker or fruit grower for theirs, neither should they be held morally or legally more responsible for a mislabeled tree any more than the fruit grower should for a mislabeled package of fruit. The buyer of a barrel of apples labeled XX and topped XX who finds the remainder of the barrel culls or worse, has just as much cause for a damage suit against the fruit grower as many of the buyers of nursery stock have against the nurseryman. When deliberate, transparent fraud is committed, both nurseryman and fruit grower should willingly make amends for such losses on the part of the buyer. When mistakes are made unintentionally, both sides should be ready to make reasonable concessions. Many complaints are unreasonable and in consequence therefore are hard to adjust."

"A planter bought a few thousand dormant buds after he was advised by the nurseryman that dormant buds were unsatisfactory stock to plant, but having the peach fever he insisted on having them. Those dormant buds were purchased from a small nursery and were dug, bundled, and delivered by the grower to the nurseryman, who packed and shipped them in the original bundles to the planter. This planter was a lumberman, and knew nothing about planting or caring for a tree, so entrusted the planting to hired help. A severe drought soon after the stock was planted caused the loss of practically the whole lot of these dormant buds, which under the most favorable conditions would have been an unsatisfactory stand. At the time this planter received the stock, he wrote saying that a few of the trees had root-galls on them, and he was advised to discard them, and turn in an account of all such stock, that the same might be deducted from the nurseryman's bill, and at the same time credit could be given to him; this he did not do, as he wanted the trees. After the buds failed to start he was told that the knots or galls were the cause of it all. He took the case to a scientific man, and he at once told him that his ground was ruined for future peach orchards, etc.; and on the strength of all this he wanted damages. The purchase price of the stock was about \$200, but the nurseryman, finding that the man was unreasonable, and was being unreasonably advised, offered to make a settlement with him—not on reasonable grounds but simply to avoid trouble and lawsuits) to give him several hundred dollars to settle and stop his noise. So confident had he become that he had a chance to get a larger amount as damages than he could ever possibly get out of peach crops, that he asked for thousands of dollars to settle. His lawyers encouraged him, and before the case came to a trial they had increased the amount to double the original

claim. The case was tried in the home town of the planter, by a jury of his neighbors, and they gave him a verdict of about one-half the amount that the nurseryman had originally offered to pay him."

REPLACING TREES

EDITOR NATIONAL NURSERYMAN:

In your March number of the NATIONAL NURSERYMAN just received, an article over the signature of J. S. Kerr, of Texas, attracted my attention and was read with a great deal of interest. I hope every nurseryman who reads it (and they all ought to) will give the subject serious thought.

Mr. Kerr takes the position in regard to replacing trees that fail to grow that I have had for years. I do not believe any man in the business is smart enough or brainy enough to study up a more unreasonable, foolish or nonsensical proposition than this thing of replacing trees free of charge.

It is not the man who is deserving of this favor who gets the benefit; not the man who is thrifty and gives his trees and plants proper care, but the shiftless, lazy man who gets the benefit. It is the man who through negligence or lack of knowledge as to how to take care of the stock he buys receives these gifts of our wonderful liberality.

I often wonder who was the originator of this custom. I imagine it was some one who conceived the idea that if they were to make this offer, they would get the business of the "other fellow" and soon become a "Rockefeller." But if this was their idea, it did not work out as they had hoped, for the rest of us soon fell in line, and this left the originator no better off than the rest of us, but made it a losing proposition for all.

I say this scheme might have been started in this way, and it might have been started by the small dealer who sells here today and there tomorrow and is willing to replace free just so long as it pays him to do so. He then feels that he needs a change of climate; picks up his plate book and walks out saying to the landlord, "I will see you later," nix. But no matter how this custom started, let us get together and stop it. Not as the Dutchman says, "Put our heads together and make a block pavement," but get our heads together and stop the customers from making block-heads of us.

I, for one, would not favor the replacing of trees only at regular price. I believe that half-price would be about the fair thing, which in time would be satisfactory to reasonable customers, and we all know that this we can afford to do.

I firmly believe that we would have more trouble for the first year or two in getting our agents into line on this proposition, than they would have in getting the customer to take it up as a fair and just proposition.

This is not supposed to be read by the Catalogue nurserymen, only those who run agents.

Wauwatosa, Wis.

T. J. FERGUSON.

ANNUAL TRIP ABROAD

Mr. McHutchison of McHutchison & Co., New York city, sailed March 30 for Europe on the steamer Lusitania. This is his annual trip abroad.

Correspondence

SOMETHING ON ROOT GALL

EDITOR NATIONAL NURSERYMAN:

Where did the Elberta Peach originate and by whom was it originated? Was it an accident or obtained by experiment? (Ga. Chinese Cling and Crawford.)

I have been very much interested in some remarks made by A. L. Brooks of Topeka, Kansas, in the January number of the NATIONAL NURSERYMAN, page 429, on root knot, also the reference to this same question by Chas. C. Bell, in the February number, page 468. Mr. Bell speaks of his experience at a horticultural winter meeting at Farmington in December. Would like to know in what state this meeting was held. What Mr. Brooks and Mr. Bell have said is of no small importance to the nurserymen, because both conclusions are reached by actual experience.

I have long since been convinced that there is a great deal of guessing done and unfounded conclusions reached upon the question of root knot, hairy root and crown gall. Three years ago the writer had the pleasure of listening to Prof. Hedgcock at the National Convention at West Baden, at which time he discussed freely and extensively this question and gave the Association the benefit of his experiments, which were conducted on a broad scale. At that time the government, with all of its facilities, had not arrived at any definite conclusion as to this disease, its origin, its treatment, contagion, etc., but simply gave the results of its experiments for what they were worth, and I have not yet seen any definite report from the government as to the causes, the results, contagion, or remedy for the so-called root knot. I am free to confess that I know nothing about it, but believe only a small per cent of the talk made against it. Of course every one knows, especially the nurserymen, that the great hue and cry against it comes from the inspectors and state agricultural institutions.

So far as my limited information goes, all of the declarations as to the crown gall and root knot being of no importance, especially attaching to apple trees, has come from just such men as Mr. Brooks and Mr. Bell, who have determined by actual observation. So far as this has gone and what they have been able to gather from other experimenters, root gall amounts to little or nothing.

I would like to hear through the columns of the NATIONAL NURSERYMAN or any of our leading horticultural periodicals the results of actual experiments by those people, who claim that crown gall, root knot and hairy root cause absolutely and beyond question the destruction of apple trees, and, that trees so affected will not grow and thrive, and rarely reach a bearing age. My impression is that this side of the question, so far, has been largely discussed from the theoretical standpoint.

I understand that trees are grown, sold and planted in the middle West with little reference to these so-called defects, and the Western nurseryman who finds himself obliged to buy any nursery stock in the East and Middle West is confronted with the proposition of "what will you do with the root knot and crown gall? These trees are accepted

in this country and are all right. We cannot afford to sell them to you to have them thrown out by the inspectors of the Inter-Mountain country."

It is also evident that unless there is a letting up on this fad that the Inter-Mountain nurserymen will be obliged to charge 50% more for their trees or go out of business.

Roy, Utah.

P. A. DIX.

RETAIL PRICES—COGENT REMARKS

EDITOR NATIONAL NURSERYMAN:

We have read with interest the remarks of the Winfield Nursery Co., as set forth in the January issue of your valuable paper, under the heading, "Demand Keen in Kansas," and, if privileged, we would like to add a few lines in supplement.

In their paper the above firm brings out two very significant points, namely; that trees of quality are in demand all over the country *far in excess of the supply*, and that planters are *willing to pay* four times as much for such trees as others are being offered at; then goes on to say that the nursery business is undergoing *a change*.

These pronounced truths prompt us to raise the question: How much longer is it going to take for these conditions to work a change in the retail branch of the business equal to that referred to by your correspondent in the wholesale? We mean, of course, here in the West, where, in spite of the fact that values have doubled and tripled during the past few years, many of the firms (and leading ones) are satisfied to continue marketing their stock through the retail channels at practically the same prices they were selling at 3 to 6 years ago, when conditions in general, and the wholesale values that have grown out of them, were as different as is day from night.

We contend that where a firm is sending out stock of high quality these things are not only unnecessary, but decidedly wrong, for, as is made clear in the article above referred to, the people are willing to pay what such stock is worth, and, in this country today, they have the money with which to do it. With apple trees, as an example, worth \$85 to \$135 and \$150 a thousand on the wholesale market, we are at a loss to understand wherein any firm should be willing to retail them at 15, 20 and 25 cents apiece, or at \$12, \$15 and \$20 in hundred lots, and yet, that is exactly what is being done by most of the Western nurserymen. There isn't any reason why, with such prosperity as is general over this Western country today, we shouldn't get just as good prices for our stock in a retail way as the Eastern firms. If we're going to sell at wholesale prices, let's do it through the wholesale channels and *not* through agents. On the other hand, if we are going to employ salesmen and meet the heavy expense (saying nothing of the risk) that the business so conducted carries, let us get a fair price for our stock. This is another "change" we hope to see the business undergo.

Lawrence, Kan.

MOUNT HOPE NURSERIES.

We are pleased to receive at our business office all copies of new editions of catalogues. Kindly put us on your mailing list. We publish from time to time lists of those received.—THE NATIONAL NURSERYMAN.

OLD FASHIONED WINTER IN THE MIDDLE WEST**GENERAL CLEAN-UP**

EDITOR NATIONAL NURSERYMAN:

Our winter conditions here have been extreme cold and more snow than we have had for years; in fact, the snow has just left us at this writing. We do not believe that the orchard or nursery stock has been injured as the covering of snow was complete all winter, thereby protecting the trees. The outlook for the nurserymen is for a general clean up, as all kinds of stock seem to be moving freely. It seems to be a difficult matter to furnish what the people want and a great many of the letters written are to say, "We are unable to furnish the stock that you want." The lines of stock most in demand are Apple, Peach, Pear and Plum trees, and there is also an enormous demand for root grafts. We have been led to believe that the nurserymen in the West are satisfied with the conditions as far as sales and prices are concerned at the present time.

Geneva, Nebr.

YOUNGERS & Co.

MINNESOTA

EDITOR NATIONAL NURSERYMAN:

Replying to your favor of the 1st, there is not much to report in the nursery trade at this time except that business is good. The usual preparation for spring work is the order of the day. The outlook is good but the discouraging feature is the congestion of freight traffic thruout this section. Strikes, lack of motive power, cold weather and poor coal, seem to have tied the freight business up worse than we have ever seen it. They are beginning to move a few cars, however, and the outlook is a trifle brighter. If the conditions that have obtained the past two months should continue thruout April, it would thoroly demoralize the nursery business in this section. However, we are not climbing hills in advance, and we are assured by the railroad that shipments of trees will receive prompt attention.

Lake City, Minn.

THE JEWELL NURSERY CO.

A WINTER OF ABUNDANT SNOW FALL IN NORTH EASTERN IOWA

EDITOR NATIONAL NURSERYMAN:

The winter just passed has been a remarkable one, more like an old fashioned York State winter, when the snow came early in November before the ground was frozen but little, and no thaw whatever until the second of March. This snow, replenished at intervals, averaged during the whole time at least twenty inches deep. Of course there has been no root-killing of the most tender varieties of plants that we grow here. No top-killing of anything that we have noticed. Orchards are in good condition to bear loads of fruit, if properly sprayed and taken care of.

One morning at sunrise the thermometer stood at 25 degrees below zero, but as far as we know no damage has resulted from it. The business outlook is very much better than a year ago. As we see it at present, (March 3) the business outlook is all right and the demand for nursery stock seems to be rapidly increasing, and sales are 50% ahead of this time a year ago.

Osage, Iowa.

CHARLES F. GARDNER,
President Gardner's Nur. Co.**NORTHERN IOWA**

EDITOR NATIONAL NURSERYMAN:

We have had this winter in Northern Iowa in common with all of the Northern sections of the United States, an extremely heavy fall of snow. We have had good sleighing here since the last days of November with but very few thawy days, and until within the last two or three days the snow covering has been about two feet on the level, which is a very heavy fall for this section.

The weather has usually been cold, although not extremely so, and I do not anticipate any injury to nursery or orchard stock. Have seen no indications of injury among our trees and do not hear of anything among the orchards. This heavy covering of snow is likely to delay spring's work, however, we may be disappointed in this as I do not think there is much frost in the ground and a warm rain or good thawy weather, would, I anticipate, clear away the snow and likely leave us with but a small amount of frost in the ground.

Charles City, Ia.

E. M. SHERMAN, Pres.

EMBARASSED BY SELLING OPPORTUNITIES

EDITOR NATIONAL NURSERYMAN:

We have the kindest feeling for the NATIONAL NURSERYMAN and are always ready to help support it as well as the National Association. We also appreciate very much the ability with which this paper is edited and the amount of good nursery news contained in it. But at this time we are cutting out all advertising because it is more of a question to stand off purchasers of leading varieties of apples than it is to sell them. Our sales have been very heavy and stock is practically exhausted, especially in apples, and other lines are so limited that we are not making any extra efforts. Have had very cold, snowy winter, the like of which has not been known in this country for a great many years. It got cold so gradually and continued so evenly that the horticultural interests are not effected so far.

Roy, Utah.

DAVIS COUNTY NURSERIES.

P. J. BERCKMANS ON "GEORGIA FRUIT EXCHANGE"

With the rapid increase in fruit products, it became evident some years ago that a combination of all fruit growers was necessary, in order to perfect better methods of disposing of their fruits. As this was eminently the commercial feature of the industry, the Georgia Peach Growers Association was the outcome of these conditions, and relieved the Horticultural Society of the commercial work, leaving the scientific investigations as its special province. After several years of existence, the peach growers recognize the importance of organizing their association upon a strictly business plan, and through the suggestions of the State Horticultural Society at its past two annual sessions, the Fruit Exchange was perfected during the past year. Its work has been eminently successful; while a crop of only 2,000 car loads of peaches was marketed this year, still it brought nearly \$1,500,000.00, or about the same money returns which a crop of nearly 7,000 car loads brought last year. This is the result of systematic business methods, which in future years will make commercial fruit growing more lucrative and increase this industry, because fruit growers will no longer be at the mercy of glutted markets and irresponsible commission merchants.

(From the Proceedings of the Thirty-Third Annual Meeting of the Georgia State Horticultural Society.)

Fruit and Plant Notes

EXPERIMENTS WITH THE HIMALAYA RASPBERRY NATIONAL NURSERYMAN:

In your February issue I see the Himalaya Raspberry is described.

I bought a few plants at \$1.00 each about ten years ago. It may be valuable elsewhere but it is not here. It is an enormous grower but the berries are extremely small and ripen in the middle of our dry summer.

I appreciate our department at Washington for the good things it has introduced but I was shocked last spring to receive a few plants from the department with information that it had sent me something of great value, etc.

I wrote them that I quit it eight years ago and I had a row of it 200 yards long, 30 feet wide and 6 feet high and I would guarantee it to turn a mad bull or a scared cat, and suggested that hereafter, before it invested in a new thing for distribution it should inquire about them of some of the older nurseries.

I can name a bunch of American Nurserymen, whom for valuable introductions, for intelligent testing, and for comprehensive and honest recommendations, I would put against any set of men or the officials of any government that ever sent out, "Seeds that never grew."

If you do not live near me try a few Himalaya if you want to, but try them before you plant a big lot. The leaves look like a raspberry, a little, and the vines never die back.

Yours truly,

Austin, Texas.

F. T. RAMSEY.

BEST SCOTTISH PEACHES

A Scottish correspondent of the *Journal of Horticulture* (London), states that in their experience the best peaches for outdoor culture in Scotland are, Waterloo, Hale's Early, Amsden June, Stirling Castle, Royal George, and Early Gros Mignonne. The best half-dozen for cultivation under glass to give a good succession are, Hale's Early, Crimson Galande, Goshawk, Stirling Castle, Bellegarde, and Prince of Wales. In good seasons peaches do wonderfully well in Scotland, when planted on a good wall with a south exposure. Fruit of medium size but of excellent quality, are freely produced. Leaf blister is one of the worst enemies to be contended with in outdoor peach culture. "Medela" is, however, proving an effective antidote, spraying the trees with it in February and March acting beneficially.

BOBBINK AND ATKINS

A handsome catalogue for Bobbink & Atkins, Rutherford, N. J., has just been printed by the McFarland Company of Harrisburg, Pa. The cover illustrations are half tones in black and very effective. The typography is of the standard character.

ISAAC HICKS AND SON

Under the title of "News for Long Island" this firm has issued a handsome catalogue, beautiful and useful.

foreign Correspondence

BOSKOOP, HOLLAND, A GREAT NURSERY CENTRE

As may be known to you already, an unusually large order was placed in Boskoop, Holland, some months ago, by an English firm, for the laying out of a park in America, the property of a wealthy American who, it appears, has made his millions of dollars in the tobacco and cigarette trade. The order calls for 36,000 blue spruce trees, *Picea pungens glauca* (Koster). The color of the plant is of a bright blue, its needles very long and stiff. The variety is well known to the trade. Its common name, "Koster" is derived from the name of its propagator who introduced it some thirty years ago.

At present the exporters of this order are busy with the packing. We had the opportunity of visiting the nursery of H. den Ouden & Son at Boskoop, which firm has a large part of the order to execute.

We were told that the plants run from fifty cents up to six dollars each, according to their size. In addition to their local value, there are the packing charges, which will run up to about \$2,800.00; the freight, insurance, etc., from Holland to America; and the duty into America, which is no small item.

Mr. P. den Ouden showed us round the nursery, packing sheds, and glasshouses. In the latter, rhododendrons, hardy azaleas, conifers, etc., are raised. Of the last named there are over 450 different improved sorts growing in the nursery, of different sizes up to 12 ft. and higher, from which one can get some idea of the extent of such a business. Mr. den Ouden, who is a native born, established Boskoop nurseryman, gave us some idea of the village's enormous export trade to all parts of the world, especially to the United States of America.

Owing to the numerous nurseries in Boskoop—over 700, and the harmony existing between them, (especially in the case of the smaller nurserymen who have no export trade), business facilities are excellent and close at hand; what one runs short of he secures as a loan, or by exchange or purchase from his neighbors. The motto in Boskoop is: "Help each other," and herein lies their strength. What one does not know he learns from the other. It is therefore difficult for an outsider to become a nurseryman in Boskoop.

There are four protective trade societies, one for the American, one for the English, one for the German and one for the French export trade. These societies look after their mutual interests in the way of cheap freight, etc.

A great drawback to this world-renowned and interesting village (or nursery colony, if you prefer to call it such), is that there is no railway communication, steamboats and vehicles being the only means of reaching Boskoop.

VILMORIN-ANDRIEUX & CO. ESCAPE FLOOD INJURY

The many friends of Vilmorin-Andrieux & Company of Paris, will be glad to learn that the floods have not affected this firm to any great extent. Their warehouses in the Rue de Reuilly were beyond the reach of the floods. The buildings containing the offices on the Quai de la Megisserie, near the Seine, had their cellars flooded by five feet of water, but the damage was confined only to the engines and boilers supplying the light and heat. Stoves, lamps, candles, etc., were installed in the various offices, so that business was not interfered with.

The greatest drawback has been the impossibility of shipping goods from Paris, as several of the great railroads have been under or surrounded by water. Under the circumstances American trade should be patient regarding the balance of orders.

The May number will contain more information about the annual convention.

MORE ABOUT INSPECTOR PERNICIOSUS

EDITOR NATIONAL NURSERYMAN:

Sir:—For three or four years the nurserymen have been assured that the time was propitious for a change from the drastic measures against nursery infestation of San Jose Scale.

With the general infestation of most orchard sections the inspector has left the fruit grower to handle the scale proposition individually as they see fit. Under these conditions the nurseryman has found it increasingly difficult and in most cases impossible to grow stock free of scale, even by the use of every reasonable treatment entomologists can suggest. While these unfortunate conditions exist, there is a remedy which is convenient, cheap and effective which will absolutely destroy San Jose scale on nursery stock and make infested nursery stock as safe as any. I refer to fumigation when properly done. In spite of the fact that this is a perfect remedy and that there is no public demand or need for such drastic measures, the process of destruction goes on.

The "destructionists" in the National Association of Nursery Inspectors still control at the ratio of about two to one. In the meanwhile, old established nurseries are being bankrupted and suffering useless and unnecessary loss.

With this in view, I asked you to publish the article on Inspector perniciosus which appeared in your March issue. I am prepared to defend my position in later issues of your paper if it should be thought best.

Painesville, Ohio. W. B. COLE.

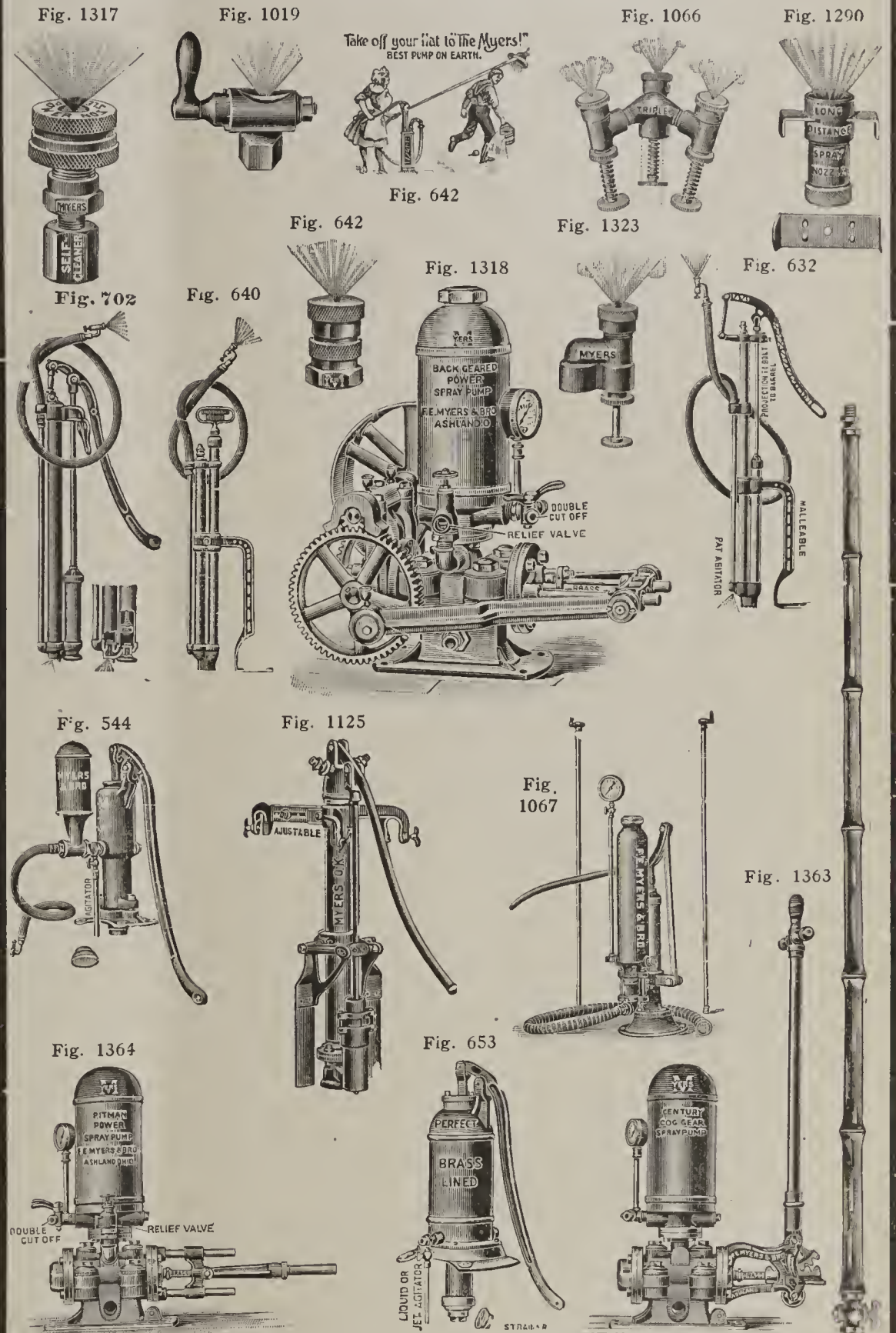
THE MONTANA NURSERY CO.

The city of Billings, Montana, has published a booklet descriptive of resource and attractiveness. In the center of the book is a half-tone 22x3 inches depicting the nursery lands of the Montana Nursery Co. The following description appears with it:

The Montana Nursery Company plays a most important part in the development of Montana and in the business activity of the Sugar City. They have the largest institution of the kind within a radius of nearly a thousand miles. Being comfortably located on their 158 acres of nursery ground two miles northeast of the city, where they grow millions of trees, shrubs and plants of all kinds adapted to this climate. They have the best packing and shipping equipment of its kind in the Northwest, all stock being packed and boxed under roof. Their product is shipped to all parts of Montana and adjoining states, which are canvassed by their large force of salesmen bringing them a steadily increasing number of satisfied customers. Their aim is to supply the best for the money. The Montana Nursery Company is incorporated, with L. A. McDonald, President, and D. J. Tighe, Sec'y and Treas.

Myers Spray Pumps

NOZZLES, HOSE, FITTINGS, ETC.



WRITE FOR DESCRIPTIVE CATALOGUE AND PRICES

F. E. MYERS & BRO.

ASHLAND PUMP & HAY TOOL WORKS

Ashland, Ohio

190 Orange St.

CATALOGUE COMMENT

The General Catalogue of Ellwanger & Barry, Rochester, presents an example of the finest taste and workmanship. It is an ideal catalogue, its descriptions though brief are complete and helpful, its illustrations are splendid examples both of photographic art and of the specimens depicted. In typography, there seems to be nothing left to improve. Of the many catalogues that come to this desk from all parts of the world, this catalogue deserves the first award. It is not saying too much to say that, in every way, it is the leader of nursery catalogues.

Business Movements

UNIQUE ADVERTISING

The following is the legend which decorates the left hand corner of the envelope containing the catalogue of the Chase Nursery Company, Huntsville, Ala.:

"I am from the Chase Nursery Co., Huntsville, Ala., and so hot inside I might strike fire in the waste basket."

Our friend, Herbert Chase, of tree gauge and mulc skin mitten fame, knows how to produce catching head lines.

A note from J. C. Chase of Derry Village, N. H., states that he is just leaving for a several weeks' cruise in the West Indies.

The E. Gill Nursery Company, of West Berkeley, Cal., have just purchased 85 acres of land at Eden Vale, six miles south of San Jose, which they are now planting to nursery stock. This new place will be carried on in connection with their home place where field grown roses for the wholesale trade are made a specialty of.

R. F. Spurlin, Amity, Ark., Proprietor of the Amity Nursery, reports that there is no nursery at Ussery, Ark. The Home Nursery which formerly was located there has been moved to Amity where it is known as The Amity Nursery. Mr. Spurlin is the proprietor. Nurserymen will do well to strike the Home Nursery from their mailing list and save much postage and literature.

Among Experiment Station Workers

APPLE GROWING IN NEW ENGLAND. Storrs Agrl. Exper. Sta. Storrs, Conn. Bulletin 61.

This is the title of an exceedingly useful bulletin on the subject of the present status of apple orcharding in New England, with special reference to the possibility of renovating many of the decadent and neglected orchards of Connecticut. The author is the horticulturist of the Conn. Agrl. College Experiment Station at Storrs.

In this bulletin we find that J. H. Hale of South Glastonbury estimates that he has spent as much as \$250.00 an acre on clearing, planting and maintaining apple orchards on rough hilly lands bordering the Connecticut Valley. He says, "Do not give out the idea that it is an easy or cheap thing to develop a rough land apple orchard. It takes a lot of capital, as well as grit and energy, and good orchards will never be found on Easy Street."

Barnes Bros., Yalesville, Conn., make the following comment on the same subject.

"Yours at hand in regard to the cost of fitting rough land for orchard planting. The degree of roughness, as to rocks, brush or timber, and also the lay of the land varies so much that a general statement might be very misleading.

"Our Durham orchard was mostly land that had been plowed at some time. Much of this land was ready for the plow. Much more of it was made ready by simply going over it with a mowing machine preceded by one or two men with brush axes to cut out large growth, and followed by the hay rake to gather up the brush in shape for burning. Fifteen dollars per acre would probably cover the cost of fitting such land for orcharding.

"On our summit orchard, subdued about twenty years ago, we no doubt spent fifty or more dollars per acre, on quite a large tract in cutting brush and wood and removing stones and stumps."

Clematis Paniculata Strong Plants in Quantity.
Lowest Prices.
F. A. BALLER, Bloomington, Ill.

PEONIES. The world's greatest collection. Over 1200 sorts.

An exceptional list of Iris, Hardy Pinks, Hemereocallis, Phlox, Gladioli, Cannas, Dahlias, Cinnamon and Mederia Vines, Oxalis. An especially extra stock for fall and spring next.

C. BETSCHER, Canal Dover, Ohio, U. S. A.

ESTABLISHED IN 1897

EM. Van ESPEN, President

CENTRAL PHOSPHATE COMPANY

Miners of High Grade Florida, Tennessee and South Carolina Phosphate; TENNESSEE RAW GROUND PHOSPHATE ROCK, all grades

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MT. PLEASANT, TENNESSEE and 18 CHAUSSEE D'ANTIN, PARIS, FRANCE

1840

1910

OLD COLONY NURSERIES

HARDY SHRUBS TREES, VINES
EVERGREENS AND PERENNIALS

A large and fine stock of well-rooted plants grown in sandy loam. Good plants; best sizes for planting very cheap. Priced catalog free on application.

WHOLESALE AND RETAIL

T. R. WATSON, Plymouth, Mass.

HEDGE 200,000 CALIFORNIA PRIVET 200,000
250,000 AMOOR RIVER PRIVET 250,000 **HEDGE**

We also have 150,000 each in California and Amoor River in 6 to 15 inch for lining out. These are well rooted plants and will make fine stock for delivery next fall.

VALDESIAN NURSERIES

Bostic Department

BOSTIC, NORTH CAROLINA

KILL BUGS IN GROUND

APTERITE will do this—it's cheap—easy to use—kills Aphids, Maggots, Cutworms, Wireworms, etc. Write for our 32-page Booklet "N"—contains numerous letters American users—it's free. A post card brings it.

WILLM. COOPER & NEPHEWS, 64 W. Illinois St., Chicago

ROSES TO LINE OUT

200 Standard and New Sorts
in 2 1-2 and 4-inch Pots.

THE LEEDLE FLORAL COMPANY®
SPRINGFIELD, OHIO.

FOR SPRING OF 1910

We have our usual supply of NURSERY STOCK

We still have a few hundred thousand Scions to offer

John A. Cannedy Nursery and Orchard Co.

Carrollton, Ill.

Strawberry Plants

in large quantities

J. S. LINTHICUM, Wellhams, A. A. Co., Md.

OLIVE CULTURE AND OIL MANUFACTURE IN THE ARID SOUTHWEST.
University of Arizona Agrl. Exper. Sta. Bul. 62.

This is a suggestive bulletin on the history and cultivation of olives in Arizona. It discusses the propagation, draining, culture, the enemies, yields and products of the olive orchard. It gives also a number of experiments which were undertaken for the purpose of getting fundamental facts in the manufacture of olive oil, and concludes that many olives as grown in Arizona are well adapted to oil making. It shows that the Arizona olive is not below the California product in recoverable oil content.

NEW METHODS OF PLANT BREEDING. Bureau of Plant Industry, Bulletin 167.

The improvement of plants by cross-breeding varieties is gradually becoming an important factor in the culture of many of our field and garden crops. The Plant Propagator of the Bureau in this bulletin gives the methods he has used to accomplish what have been heretofore considered impossible or difficult crosses. Owing to the minuteness and delicacy of the floral organs of numerous plants emasculation is impracticable, but by the new process of "depollination" undesirable pollen may be removed from the stigma before fecundation takes place, by the application of water or compressed air to the stamens. The method is described, together with the tools required and the devices used. The writer shows how this new method of preparing flowers for crossing can be applied to a wide range of subjects. Information on the latest investigations in cross-breeding is given.

ANALYSES AND VALUATIONS OF COMMERCIAL FERTILIZERS AND GROUND BONE. THE COST OF AVAILABLE NITROGEN, N. J. Agrl. Exper. Stations, Bulletin 224.

The balance of the analyses of the fertilizer inspection for 1909, a portion of which was reported in Bulletin 223, is given in this bulletin, together with a discussion of the whole inspection. A schedule of trade values of the essential elements of plant food is given and an examination and valuation of manufactured brands, giving their guaranteed and actual composition, the Station's estimate of valuation and the selling price, together with a comparison of the value of plant food guaranteed and the value of the amount delivered.

In the purchase of fertilizers not only the quantities of the constituents present in the brands, but their percentages of available plant food is to be considered, and in this connection the utilization of nitrogen is the important consideration. There is, however, no strict relationship between commercial and agricultural values of the various nitrogenous materials, and the bulletin demonstrates that the cost to the farmer of any one form is measured not by its usefulness to him, but by the cost in the market.

CROWN ROT, ARSENICAL POISONING AND WINTER-INJURY. N. Y. Agrl. Exper. Station, Geneva, N. Y., Technical Bulletin No. 12.

The New York Experiment Station at Geneva has investigated this subject of crown rot, which has been so frequently attributed to low temperatures, fungous enemies, and bacterial organisms. The author of this bulletin is inclined to believe that the main cause of crown rot is low temperature, and that this is closely related to influence of soil and soil moisture, and possibly to the question of stock and scion relations. The bulletin gives a very exhaustive survey of the subject, but offers little in the way of suggestions for prevention or treatment.

LIME SULPHUR WASHES. The New York Experiment Station has issued as Bulletins 319 and 320 a discussion of the chemistry of lime sulphur, and a comparison of the concentrated forms of the lime sulphur mixtures as found in the different methods of manufacture. Both of these bulletins are important, but the latter is one which an orchardist can use in his business to decided advantage.

A Competent Propagating Foreman wanted at a reliable Nebraska nursery. Address "Propagator," this paper.

WANTED. Experienced nurseryman, married man preferred. Steady work and permanent position for right man. State salary wanted and give experience and references in first letter.

THE ANDREWS NURSERY,
Faribault, Minn.

WANTED-- We expect to increase our capacity and are in the market for quantities of Nursery stock (mainly young stock) of all kinds at bargain prices. Quality must be of the best. What have you?

PITTSBURG NURSERY CO., Pittsburg, Kansas
117 W. 5th St.

W A N T E D

Peach Seed, Currant, Gooseberry and Poplar Cuttings
State price and amount you can furnish

OAK HILL NURSERIES, Franklin, Mass.

FOR SALE

Well equipped Nursery Plant with good, thriving retail business in the heart of Michigan Fruit belt. For particulars write "EQUIPPED" NATIONAL NURSERYMAN.

FOR SALE--Western Nursery

Forty acres of deeded and forty acres of leased land. Stock all salable size; clean and healthy; not a scale or bug. Trade has almost doubled each year. We ship 5 to 12 hundred miles west and north of us. Trade to be supplied unlimited. We have a complete general line of Nursery Stock. We do a strict catalogue business. Are well advertised and have a good name.

Will sell for cash, or part cash and time on balance to a man who knows his business and is a pusher. This is a good investment and will pay a good dividend. Address

"NURSERYMAN"

care of NATIONAL NURSERYMAN, this office.

FOR SALE

55 Acre Nursery, stocked with over 300,000 Fruit, Shade and Ornamental Trees and Shrubs. Concrete Office and Frost Proof Storage, Tool House and large Packing House. Fine nine room residence with all modern improvements. City water in all buildings and all property inside the city limits. half mile from Post Office and one mile from depot. Soil the very best upland clay loam.

\$6,000.00 in signed orders. Many of the orders are for landscape work for private and public grounds, from \$50.00 to \$350.00. This Nursery is especially stocked for modern landscape work with the very best native and standard shrubbery. Sales will exceed \$10,000.00 at shipping time. Property inventories \$22,500.00. Will make heavy sacrifice to quick buyer. Good reasons for selling. Address

A. H. LAKE, Black River Falls, Wisconsin

Obituary

AMERICAN WINE GROWERS' ASSOCIATION

OFFICE OF THE SECRETARY
245 BROADWAY, NEW YORK, Feb. 21st, 1910.

To the Members of the Association:

We regret to announce the death of one of the organizers of this Association, Mr. Alfred J. Speer, who died in the 87th year of his age at his home, Chateau Speer, in the city of Passaic, N. J., on February 16th, last.

Mr. Speer was without question at the time of his death the oldest man in the American wine industry. He was born in Belleville, N. J., on November 2, 1822. After engaging in several enterprises, including a number of inventions, one of which was a traveling sidewalk, for which the Legislature passed an act authorizing its use in New York City, Mr. Speer turned his attention about 1870-71, to grape and wine growing, set out a large vineyard, and erected a wine cellar at Passaic.

Mr. Speer was deeply interested in having the grape and wine growers of the country work together for the common cause, and to that end he was present and took part at the first meeting which was held in New York, on February 29th, 1904.

Mr. Speer was a man of original ideas and more than ordinary ability. He will be long remembered as one of the most intelligent and worthy pioneers in our industry.

Respectfully yours,
W. E. HILDRETH, Pres.,
LEE J. VANCE, Sec.,
American Wine Growers' Association.

Mr. Vincent Lebreton, the well known exporting nurseryman of Angers, France, died on January 25th, 1910. The business of the Vincent Lebreton Nurseries will be carried on as usual under the management of Mr. Thebault-Lebreton, his son-in-law, who has been connected with the business the past eight years.

ALBUQUERQUE, N. Mex., Nov. 12, 1909.

A McKay Whitecomb, founder and proprietor of the "Pioneer Nurseries," passed over the Divide, Sunday morning, Nov. 7, 1909.

Thirty years ago he came to the south west, and settled here, which has since been his home. He had lived nearly seventy-six years, and was loved and respected by all who knew him.

He was buried with Grand Masonic honors, Wednesday, Nov. 11, 1909.

(Signed) MRS. A. M. WHITCOMB.



WANTED. Transplanted Pear Trees, 1-1½-in. cal. Choice, clean trees. Send description, variety and price. **CHAS. R. FISH & CO. Worcester, Mass.**

100,000 Apple. 1 yr, 4 to 5 ft. and 5 to 6 ft., for Fall 1910. We grow the finest 1 yr apple in the world. Figure with us.

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Surplus Strawberry Plants

We still have unsold a good assortment of standard varieties which we will quote low.

Let us estimate your "wants."

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SPRAY Decrease your loss from Scale and Fungous diseases by using Cooper's Spray Fluids—latest scientific success. Write for 32-page Booklet "N" containing testimony from American Growers—Its free—A postal card brings it. **WILLM. COOPER & NEPHEWS, 64 W. Illinois Street, Chicago.**

California Privet Fruit and Shade Trees Evergreens

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Analyses prove that sap of the wood and leaves of fruit trees etc., can be inoculated by applying it on the soil, being absorbed by the roots. Scale and other insects feeding on the sap will be destroyed.

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IVY, English, pot grown plants, 4-in. pots, 3 ft. long, 3 to 5 branches, also

VINCA MINOR, field-grown clumps in any quantity.

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Successor to WHELOCK & CLARK

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For Fall 1909 and SPRING 1910

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GRAPE AND CURRANT CUTTINGS
CORRESPONDENCE SOLICITED

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Try a small order of each for spring shipment!

JAS. H. BOWDITCH
903 Tremont Bld., - - - Boston, Mass.

Our Book Table

FUNGUS DISEASES OF PLANTS. By Benjamin Minge Duggar, Professor of Plant Physiology in the New York State College of Agriculture, Cornell University. 7 1/8 x 5 3/4 in., 508 pp., illust., wood cuts and half tones. Ginn and Company: Boston. Price, \$2.40 net.

This volume is published in the Country Life Education Series, which is edited by Charles William Burkett, formerly Director of the Kansas State Experiment Station. The growth or knowledge in the field of mycology and applied plant pathology has been very rapid in recent years. Notwithstanding this fact it is curious that no adequate treatment of the subject has appeared from the American press up to the present time. We now have a work however, which, though primarily intended for the laboratory and class room, will nevertheless be of great service to the plant grower, be he florist, vegetable grower, or orchardist.

The volume satisfies the student by giving him the latest methods in use in life history studies of these parasitic forms, in vogue in the laboratory. It aids the grower by suggesting the most practical means of controlling them. The author discusses each disease from the following view points—"The pathological effects and other relations of host to parasite." "The life history of the causal fungus;" "The approved or suggested methods of prevention or control." The long association of the author with orchardists and nurserymen has impressed upon him the importance of presenting a work of this kind in such form as will render it useful to the man in the field as well as the student of plant pathology. The illustrations depicting external appearance and morphology of the fungi will be appreciated by both classes of readers. The volume is clearly written, adequately illustrated, and in addition to the general index contains a host index of fungous diseases which will be of considerable service to the nursery grower, but more particularly to the nursery inspector.

We have much pleasure in commending this book to our readers in the most unqualified manner. It may be obtained through the NATIONAL NURSERYMAN at publisher's rate.

THE IRIS MANUAL. 5 3/4 x 7 1/2, 30 pp., paper. Publishers, C. S. Harrison & S. H. King, York, Nebr. 25c.

This is a tribute of an enthusiastic plant lover to an exceedingly interesting and attractive group of the lily family. The introduction is a poetical effusion, in excellent taste and inspiring form, enlarging on the mission of beauty and the influence of æsthetic surroundings on the up-building of character. The body of the pamphlet is devoted to discussions of varieties, of their improvement and culture. The little pamphlet is a valuable contribution to the literature of the amateur interested in herbaceous gardening.

MAGNIFICENT COLORED PLATES

The NATIONAL NURSERYMAN acknowledges the receipt of seven large plates representing Flowers and Vegetables from Sluis & Groot, Enkhuizen, Holland. Six of the plates measure 20 x 25 inches and some contain as many as twenty-six views. It has never been our privilege to see more excellent color work than exhibited by these plates. They are works of art.

These plates will be preserved and Nurserymen desiring to see them may do so by calling at our office when in the city. American printers might also find it profitable to study them with a view to approaching if not equalling them.

The Niagara County Nurseries of Geneva, N. Y., of which Thomas Marks & Co. are proprietors, have purchased forty acres of land of Arthur Pease on the Youngstown road, east of Wilson, N. Y., where they are locating a nursery this spring. They will have first class fruit trees of every description, berry bushes and other stock raised by nurserymen, and they also landscape and plant private estates. This nursery will add much to the prosperity and wealth of the village of Wilson.

R A S P B E R R Y

A number of leading sorts still on hand but going fast. Transplants for fall 1910. I'll contract to grow them before surplus tips are sold. "Nash's quality plants and hardwood cuttings."—The best packing.

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Kalamazoo, Mich.

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J. R. MAYHEW, Pres.

Growers of high grade Nursery Stock. Very large surplus for Fall 1910 and Spring 1911. Solicit a share of your patronage.

Waxahachie Nursery Company, WAXAHACHIE, TEXAS.

Wanted-- Small Ornamental Stock for lining out. Also Pear 1 1/2 to 2 inch; Cal. Apple 1 1/2 to 2 inch. Large California Poplars and Elm.

BEAUDRY'S NURSERY CO.

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Surplus Stock, Spring 1909

50,000 PEACH TREES, 1 yr. from bud.

10,000 APPLE, 1 yr. from bud.

100,000,000 STRAWBERRY PLANTS in six leading sorts.

MYER No. 1, AROMA, STEVEN'S CHAMPION.

Superior.

Gandy.

A general assortment of other stock.

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CALIFORNIA PRIVET and CATALPA SPECIOSA

ALL ONE YEAR OLD

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Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS. Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

Catalogues Received

FOREIGN: J. Blaauw & Co., Boskoop, Holland; DeGraaf Bros., Ltd., Leiden, Holland; Kelway & Son, Langport, Somerset, England; Little & Ballantyne, Knowefield Nurseries, Carlisle, England; Rivoire Pere et Fils, 16 Rue d'Agerie, Lyon, France; St. Przedpelski Plock, Polonia-Russia, Warszawska Street, No. 9; Van Dillewyn & Thiel, Ghent, Belgium.

WHOLESALE: Augustine & Co., Normal, Ill.; William F. Bassett, Hammononton, N. J.; C. Betscher, Canal Dover, Ohio; Bay State Nurseries, North Abington, Mass.; Bloodgood Nurseries, Flushing, L. I., N. Y.; John Charlton & Sons, Rochester, N. Y.; Carr's Nurseries, Yellow Springs, Ohio; Chase Bros. Co., Rochester, N. Y.; Cedar Hill Nursery & Orchard Co., Winchester, Tenn.; Elm City Nursery Co., New Haven, Conn.; Elizabeth Nursery, Elizabeth N. J.; Ellwanger & Barry, Rochester, N. Y.; Farmer's Nursery Co., Troy, Ohio; F. & F. Nurseries, Springfield, N. J.; T. S. Hubbard Company, Fredonia, N. Y.; The Highlands Nursery, Harlan R. Kelsey, Salem, Mass.; Hardy American Plants; Huntsville Wholesale Nurseries, Huntsville, Ala.; Hopedale Nurseries, Hopedale, Ill.; C. M. Hobbs & Sons, Bridgeport, Ind.; J. Jenkins & Sons, Nurseries, Winona, Ohio; Jackson & Perkins, Newark, N. Y.; Geo. S. Josselyn, Fredonia, N. Y.; Grape Vines and Small Fruits; Jackson & Perkins, Newark, N. Y.; Hiram T. Jones, Elizabeth, N. J.; Jewell Nursery Co.; Lake City, Minn.; Leesley Bros. Nurseries, Chicago, Ill.; Mount Arbor Nurseries, Shenandoah, Iowa; N. G. & J. T. Merritt, Dunkirk, N. Y.; Morris Nursery Co., West Chester, Pa.; Howard E. Merrell, Geneva, N. Y.; Thomas Meehan & Sons, Dresher, P. O. Pa.; Lewis Roesch & Son, Fredonia, N. Y.; Rakestraw-Pyle Co., Kennett Square, Pa.; F. H. Stannard & Co., Ottawa, Kan.; W. N. Scarff, New Carlisle, Ohio.

RETAIL: J. K. Alexander, East Bridgewater, Mass.; The Eastern Dahlia King; Aurora Nurseries, Aurora, Ill.; Fine Ornamentals and Fruits; Brown Bros. Co., Rochester, N. Y.; M. Crawford Co., Cuyahoga Falls, Ohio; Clarke's Hardy Flowers, Daniel A. Clark, Fiskeville, R. I.; Ellwanger & Barry, Rochester, N. Y.; Evergreen Nursery Co., Sturgeon Bay, Wis.; L. J. Farmer, Pulaski, N. Y.; The "Friend" Spraying Outfits, The "Friend" Manufacturing Co., Gasport, N. Y.; The Fruit Growers Nurseries, Newark, N. Y.; Hyde Park Nursery Co., Muskogee, Okla.; Henderson's Implement Catalogue, Peter Henderson & Co., 35 Cortlandt St., N. Y. C.; Kenridge Fruit Farm, J. E. Kuhns, Prop., Cliffwood, N. J.; Catalogue of Strawberry plants; David Knight & Son, Sawyer, Mich.; Mount Arbor Nurseries, E. S. Welch, Prop., Shenandoah, Ia.; Moon's Hardy Plants and Trees, Wm. H. Moon Co., Morrisville, Pa.; Provo Nurseries, Provo, Utah; W. P. Rupert & Son, Seneca, N. Y.; Rose Valley Nurseries, Martin Lewis Benson, Prop., Dongola, Ill.; Storrs & Harrison, Painesville, Ohio; W. N. Scarff, New Carlisle, Ohio; Stump & Walter Co., 50 Barclay St., New York; Schaubert's Strawberry Plants for 1910, George R. Schaubert, Ballston Lake, N. Y.; Standard Pecan Co., Monticello, Fla.; William Tricker, Arlington, N. J.; Water Lilies and Hardy Old-Fashioned Garden Flowers; Virginia Apple Orchards, Magie Bros., Waynesboro, Va.; James Vick's Sons, Rochester, N. Y.; Wild Bros. Nursery Co., Sarcoxie, Mo.; Fruits, Trees and Flowers; E. W. Wooster, Ellsworth, R. F. D. 4, Maine, Berry Fruits.

The Stark Year Book for 1910, from the Stark Brothers' Nurseries & Orchard Co., Louisiana, Mo. This is the first issue of a book to be published annually, giving descriptions and prices of their nursery products, with illustrations in black and beautifully colored plates. It is designed as a guide to fruit growers, and to be of practical assistance in making selection of shrubs, climbing vines, shade trees, or other ornamentals. The workmanship is perfect, and the presentation of the subject matter above criticism, both from the artistic and scientific point of view.

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Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our **HOLLAND NURSERIES**. Some of the goods on hand here during the packing season.

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ANNOUNCEMENT

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I believe there is room for another nursery growing this line of stock, and it will be my aim to produce as good an article as can be grown. This nursery is incorporated and will be known as

THE GREENBRIER NURSERY COMPANY, Incorporated **GREENBRIER, TENNESSEE**

Soliciting a share of your patronage, I am, very truly yours,

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Also full stock of other varieties and Small Fruits

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Hydrangea Arborescens Grandiflora

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We offer the largest stock of strong 2 year old plants in America of this finest HARDY ornamental Shrub introduced in fifty years and at extremely attractive prices.

Also strong plants of Teas' SNOWBALL HYDRANGEA (*Hydrangea Cinerea Sterilis*) a native species, distinct from the first mentioned, but a fitting companion to it. We have the only considerable stock of this plant in the world.

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BARTLETT STANDARD PEARS, 2 year, nice stock
CHERRY, 2 year, strong, extra fine, sour varieties
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Write for prices



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"Hills of Snow"

*Choice strong
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Largest shippers to this country. All leading nurserymen are our regular customers. Orders booked now for delivery for season
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Also Scarlet or Crimson Clover Seed and Cow Peas.
Free from weed seeds, all cleaned and guaranteed
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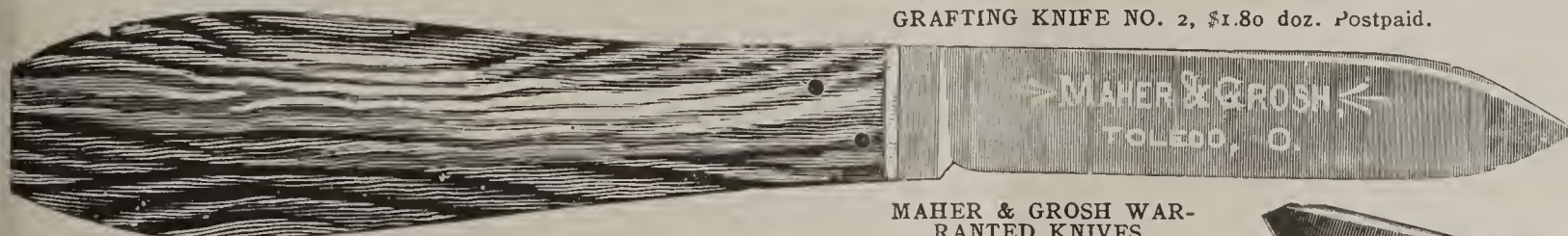
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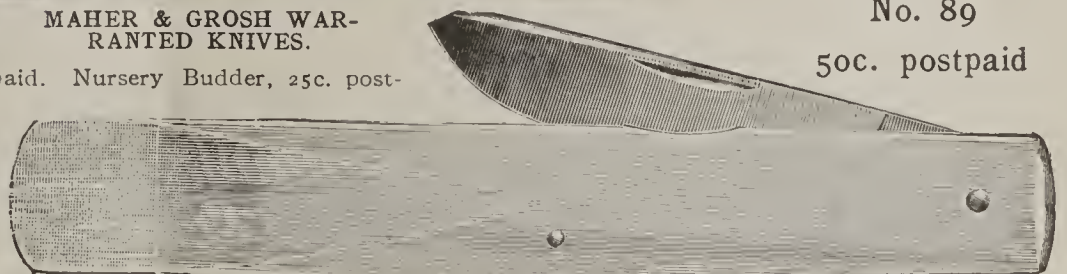
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Are now ready to quote you.

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Hardy Perennials, Paeonies, Iris, Hardy and Tender Water Lilies and Aquatics, Hardy Vines and Climbers, Decorative Greenhouse Plants, Palms, Ferns, Ficus, Araucarias, etc.

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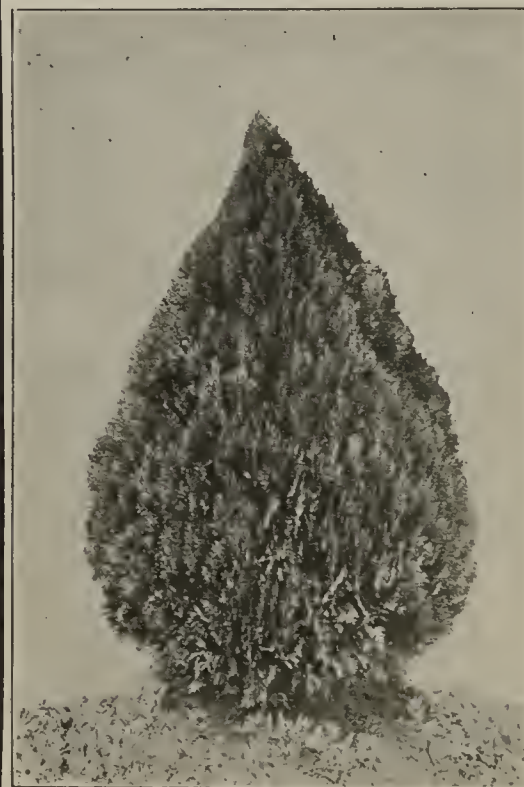
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Hybrid Tea, Tea, Polyantha and Hybrid Perpetual Roses, strong field-grown stock as Standards, Half Standards and Dwarfs in all leading varieties.

Copper Beech, selected seedling, specially good strain 3 to 9 ft.

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" 2 " June Buds.

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" Ibota, 1 and 2 year.

Strawberry Plants, best varieties.

Grape Vines, 1 and 2 year; heavy on 1 year Concord.

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Silver Maple, 10-12 ft., 8-10 ft., 7-8 ft.

Sugar Maple, 8-9 ft., 7-8 ft.

Norway Maple, 7-8 ft., 6-7 ft.

Poplars, Lombardy & Carolina, 1, 2 and 3 year.

Catalpa Speciosa, 8-9 ft., fine.

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We have a fine lot of Extra Heavy Shrubs, such as Hydrangea P. G., Weigelas, assorted; Altheas, assorted; Judas Trees, Spireas, assorted; Eulalias, Snowballs, Lilacs, Strawberry Tree.

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PEARS—Assorted leading varieties. One and two yrs. old.

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PRIVET—Amoor River. Retains its foliage longer and holds its color better than Colifornia Privet.

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WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.

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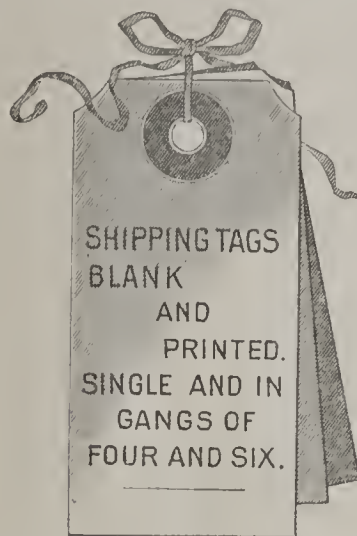
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THE BEST TREE DIGGER ON EARTH



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The one we have used for years, and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed—and does it right. If interested we will be glad to send description and prices.

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By BENJAMIN MINGE DUGGAR

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The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII.

ROCHESTER, N. Y., MAY, 1910

No. 10

EDITORIAL WANDERINGS

The New South. The Passing of the Pine. Changing Conditions.

THE last days of March found the editor, accompanied by his good wife, on board a steamer of the Savannah Line from the port of New York, headed down the coast. This is an exceedingly pleasant way of leaving the metropolis if the weather is favorable, as it was on this occasion. Nothing could surpass in point of temperature and sunshine the balmy conditions which accompanied the vessel from the North River to the port of Savannah. The gentle breezes and sunshine of the day were succeeded by glorious moonlight at night. We heard, however, that it was not always thus! In weather of the quiet order it is an exceedingly restful trip, devoid even of the small social functions, not always desired, incident to more extended ocean travel. The company, too, that one meets on these steamers is of the quiet order. The only diversions apparent in this trip were small excitements attempted by a group of baseball sports in the way of exploiting "wireless pools," and opening light weight "jackpots" on the side. The preponderance of the passenger list was made up of the schoolma'am order, in quest of rest and quiet. Although the weather was of the brightest and most favorable type going down, the arrival of the steamer in Savannah was marked by a fine downpour of warm rain. It was soon discovered on landing that the country was much in need of rain, and that the shower, while beneficial, was altogether inadequate. The weather from the 20th of March until the 4th of April was distinctly warm, not to say hot. The heat however, was considerably above the normal.



Late March on a Quiet Country Road in North Florida.

THE NURSERY BUSINESS

"Flourishing" was the descriptive term heard everywhere. The South is coming into her own. Land values are increasing. Farmers are becoming more confident and satisfied. Labor problems, however, are becoming more difficult. At the Berckman's Company, Augusta, the shipping season was still in full swing in the last week in March, and the sound of the saw and hammer issued from the packing house until eleven o'clock every night. This Company make their own packing boxes, and the night gang has been at work boxing and packing for some weeks. One of the advantages of the South is the long shipping season. The Berckman's Company is rapidly extending its business, and this is particularly true of landscape work and ornamentals. Trade in ornamentals is increasing, and the demand for conifers, for house grown citrus fruits, and subtropical ornamentals, is largely on the increase. The Nursery is located near Augusta's fashionable winter resort section, and adjacent to the attractive grounds of the noted Country Club, so that the borders, avenues and driveways of the establishment are much frequented. It was a great pleasure for the editor to note the activity of the veteran horticulturist, Prosper J. Berckmans, for many years president of the American Pomological Society, and at the present moment president of the Georgia Horticultural Society, who though an octogenarian, retains the keen interest and knowledge of plants so characteristic of him forty or more years ago.

GLEN SAINT MARY NURSERIES

This nursery company, though situated farther south, located as it is in the north tier of counties in Florida, had as nearly closed up its shipping season as it is possible for a citrus nursery to do at almost any period of the year, for there is a more or less perennial demand and continuous movement of orange, grape fruit and the like. The striking thing noted here was the strong demand for satsuma oranges on trifoliate stock. The somewhat recent demonstrations, in which this Nursery has taken a leading part, of the superior hardiness of satsuma, especially when worked on trifoliate stock, has caused an enormous demand from planters in the Gulf States, notably Texas and Louisiana. Trifoliate stock is being grown in great blocks, as the peach is grown farther north. It has been conclusively proved that by the use of this stock the orange may be carried considerably farther north than would otherwise be possible. This nursery operates a branch exclusively for oranges and

these men, as we understand plowing in the North. It is simply scratched. One may go into a cotton field, as prepared by the usual type of renter, and find not more than three inches of the surface soil stirred, and in some cases the cotton is put in by merely opening a furrow between the rows of last year's crop. Then, again, the main dependence for the crop of the season is placed upon the fertilizer. It is a case of constantly adding plant food. Little or no attention by this class of farmers is given to the necessity of providing humus for the land so that the nitrogenous content may be kept up. Fortunate it is that nature produces abundant and spontaneous crops of legumes and other plants which somewhat automatically return humus to the land. Prominent among these adventitious crops is the beggar weed, a very valuable legume. Among other leguminous crops used are velvet bean and cow peas. These grow with a luxuriance astonishing to the Northerner. In short there seems to be altogether too much dependence



The Passing of the Southern Pine. Clearing for Pecan Orchards in Southern Georgia.

tropical stock at Winterhaven, Fla., in one of the most reliable orange growing districts of the state. Both Messrs. G. L. Taber, president, and H. H. Hume, secretary, are actively engaged in promoting fruit interests in the state, as well as in furthering business interests through nursery development.

LAND DEVELOPMENT IN SOUTH GEORGIA AND NORTH FLORIDA

A considerable advance in price of land has been noted as we have visited Florida and Georgia periodically during the past five years. The recent improvement in cotton prices has done much to stimulate and strengthen interest in farming. Areas lying idle for considerable periods are now being worked, new lands are being cleared, and not only is more cotton being planted, but farming is taking on a more diversified complexion. The bane of agriculture and horticulture in the South is the traditions of past customs and practices, which still remain and are being transmitted by the colored renter of the land. The soil is not plowed by

placed upon applying fertilizers, and too little upon the necessity of keeping up the store of humus in the soil. A change of system is bound to come, but it can hardly be expected to take effective form while the negro cotton grower continues to rent his "one mule farm" of thirty to forty acres, and pretend to cultivate this with a single horse or mule, hence the derivation of the term "one mule farm."

THE PASSING OF THE PINE

The great pine forests of Georgia and North Florida will exist only as memories in a few years. The lumberman, the turpentine manufacturers, the perennial forest fires, are steadily lessening these picturesque and valuable areas, and the exploiter of lumber is being driven each year to more and more inaccessible parts of the country. In some places the second growth of timber is appearing, but unfortunately this is often of the least valuable sort. Short leaf pine more frequently succeeds long leaf than otherwise. A good forest policy firmly enforced is much needed in this part of the country.



The Labor Problem is Sometimes Difficult of Solution in Southern Nurseries.
Women are Occasionally Employed.

NUT INTERESTS

The past five years has seen the development of a great pecan industry in South Georgia and North Florida. This nut leads all fruits in point of public interest. Large areas are being planted and exploited in various ways. Some of this exploitation is reasonable and some of it is unreasonable and unsafe. Those best qualified to judge, believe the interest in pecan culture to be well founded. We have no doubt that it will prove very much the same with the pecan as has been found to be true with other fruits, that judgment, intelligence, and right practices will be rewarded with reasonable, and perhaps large profits, but in the great mass of planting and in the large number of schemes being exploited we can always count upon a certain percentage of failure. We saw seven-year old trees of grafted varieties, 25 to 30 feet in height, which bore 30 lbs. of high grade nuts in 1909. We saw a block of 80 acres of five-year old trees which the owner refused to sell for \$80,000.00 a few weeks ago. These instances are quite in line with the glowing reports which come to us of the success in apple growing on the Pacific Coast. At any rate large blocks of pecans are going out and many of the orchards are being cared for intelligently and thoroughly. It would appear that this business is just as stable as Oregon and Washington fruit growing, where much larger prices are now being paid for land upon which to grow a product of a perishable character, which must be shipped at least three thousand miles before reaching the home of the consumer.

THE INSPECTION BILL

As we go to press representatives of the American Association of Nurserymen are in Washington in the interests of the bill providing for inspection of import nursery stock. There has been considerable difficulty in adjusting the practical necessities of the case to the theoretical requirements of the situation. The nurserymen have

insisted that dock inspection is impossible. The descriptive article on the conditions prevailing at the port of entry in last month's issue of the NATIONAL NURSERYMAN supports this contention, and the point is likely to be conceded by the promoters of the bill. Inspection then will take place at the point of destination.

The United States Entomologist is, however, properly concerned over the possibility of introducing new and dangerous pests, and should have such authority as will permit him to exclude importations from nurseries or regions known to be infested with dangerous insect pests, or from nurseries flagrantly careless in reference to these enemies. Authority of this kind will have a salutary influence

on European growers importing stock into this country. It will also tend to bring about a better and more thorough system of inspection of the nursery shipping the stock. The report of the Legislative Committee is given on page 598.

SPECIAL TRAIN SERVICE TO DENVER

F. A. Weber, Chairman of the Arrangements Committee, has a plan for running a special train out of St. Louis to Denver. It is part of that plan that special cars from the East shall join at St. Louis, the cars made up of the delegations from Indiana, Kentucky, Illinois and points adjacent to St. Louis. The Kansas City delegation could be met on the line, and the Iowa and Nebraska nurserymen picked up at Wyoming, Nebr. This is all figured by the Burlington Route. In this way, a special train of five or six coaches would be made up.



"Boxed" Pine Trees. Sap is Gathered from which Turpentine and Resin are Manufactured.

THE PROPAGATION OF ORNAMENTAL NURSERY STOCK

By W. H. Wyman, North Abington, Mass.

Trees of all kinds, fruit, deciduous and evergreen, are ornamental; but these will be eliminated in this discussion, although for the most part they are propagated precisely as are those popularly known as ornamental stock: viz., broad-leaved evergreens, deciduous shrubs and herbaceous plants. All the types (species) of broad-leaved evergreens are raised from seed while hybrids are propagated by budding or grafting the seedlings, or by layerage. The last is the slower of these methods and is less frequently adopted by commercial nurserymen. Not to any considerable extent are Rhododendrons grown in America. In Holland, Belgium and England, so far as our observation goes, all hybrids are grafted for the most part on *A. Ponticum* seedlings of about two summers' growth. This is done in the winter, under glass. In the spring they are planted out in beds, again to be transplanted a second time into nursery rows and the third year they are sufficiently large for sale.

Our chief interest is in the propagation of deciduous shrubs and herbaceous plants. Of the various methods of propagating this class of stock the following should be mentioned as the most general: By sowing seeds, the seed method; layering, cuttings, both hard and soft wood; by divisions and by budding or grafting.

THE SEED METHOD

Of all these methods the first is the most natural; but it cannot be adopted only so far as the propagation of types is concerned. The seeds of all hybrids cannot be relied upon, only to reproduce their original types. For example, *Ligustrum regelianum* seeds as profusely as the *ibota*, the type from which it sprang; but the seedlings will all be *ibota* with possibly some variations, but never *regelianum*. While the seed method of propagation is the most natural of all methods, we believe it one that requires as much painstaking study as any. Over against this in the order of naturalness is the stooling or layering method, the simplest or least difficult of any; but not much in vogue in this

country, because it is too slow for commercial purposes. In Holland shade trees are to quite a considerable extent produced in this way. The advantage is uniformity of excellence in quality while seedlings admit in some cases of great variations. While we believe it to be true that in this country little ornamental stock is produced in this way, the writer is acquainted with one firm of repute who grow *Hydrangea p. g.* in considerable quantities wholly by this method. This is a marked exception to the general rule. It is our opinion that while the seed method is the most natural it is, as before stated, as difficult of mastery as any

of the methods of propagation. The first step in seed propagation is the procuring of the seeds. Then they must be properly treated. If the seeds are easily separated from pulp or chaff like *Syringa Japonica* there is little to be done; simply put them in a cool place, safe from the ravages of mice, to await the day of planting. They must not be allowed to become too dry. If the seeds are encased in pulp; it is best that they be thoroughly washed out and stratified or planted immediately.

Which of these two methods is the better it is impossible to say. We would recommend what we have learned by experience the planting of a part in the fall and the stratifying of the remaining half for spring planting.

FALL VERSUS SPRING PLANTING

The advantages of immediate or fall planting are these: So much work is out of the way. Secondly, the seeds are in the ground ready to begin germination at the earliest possible moment. If nothing happens to injure them, the seedlings will be larger than will be the case if the seeds are not sown at the earliest date practicable in the spring. This method is beset with dangers, first that field mice and moles will find the bed a very desirable habitation for the winter with the result that the seeds are eaten up. Then again there is another danger which must not be overlooked though it may seldom occur. In the fall of 1905, we planted all of our seeds of the various types of roses. Ordinarily we



"Balling" Conifers for shipment in a Southern Nursery

had the right to expect a fine lot of rose seedlings the following season, but to our surprise there was only one seedling where there should have been a thousand—an absolute failure. The fault was not with the seeds we feel confident; but with the season. In February of that year we had an unusually mild spell of weather lasting for several days with the result that deciduous trees began to make new foliage. This was followed by very severe weather. It is most probable that the seeds felt the warmth of the sun and germinated only to have their little life ruined by the cold. This is a danger that may seldom arise, but as it has arisen once in our experience, we think it a matter that is deserving attention.

STRATIFICATION

On the whole, the safest method is to stratify the seeds. The danger attending this method is that the seeds will not be taken from their hiding place as early as it is necessary and germination will already have begun and to such an extent as to render the whole mass worthless. This danger attends only those seeds that germinate in the spring following their ripening the previous autumn, such as barberry, *Sambucus* and evergreen seed. But there are some other seeds, like *Viburnum opulis* and *Clematis paniculata* that will not germinate in the spring; but will do so later in the season, about September. These may or may not be planted until the last of August. If planted they must be kept screened and not allowed to dry out. If not planted they may remain stratified until they are about to germinate when they may be planted. Then there are those seeds that require two or more years in which to begin growth, like the *Viburnum dentatum*, *Viburnum cassinoides* which should never be planted until the late autumn following the year of their growth. And again there are other seeds like *Rhus aromatica* that will send forth some plants the first year, more the second and still others the third year. Such seeds are the most troublesome of any with which the planter has to deal. When one has learned all of the peculiarities of the seeds with which he has to deal he has by no means mastered the situation.

SPECIAL REQUIREMENTS

Most seeds require a rich sandy loam so light and friable that it will not bake. It must not be too dry or the little seedlings will burn; it must not be too wet or they will damp off. For the best results screening is absolutely necessary in the climate with which the writer is acquainted, say New England. Thus far all that we have said applies to propagation out of doors without glass in frames screened with ordinary lath screens. *Azalea*, *Kalmia* and *Andromeda* we believe cannot be very successfully grown in this way. They should be sown under glass upon clean sphagnum moss, where the humidity desired may be carefully maintained.

Here, allow me to remark that other things being equal, the man who has land well adapted to the growing of seedlings will succeed, while the man who has not suitable land, had better let deciduous seedlings alone and devote his attention to something else.

LAYERAGE

A word relative to the stooling or layering method in addition to what has already been said will suffice. Every tree or plant has its own peculiarities. Plants are capricious. Some will lend themselves to one method of treatment and others to another. There are some varieties of ornamentals that can be more successfully propagated by stooling than by any other method. For example, the large flowering *Magnolias*. The types can all be raised from seed, but the Chinese varieties are but propagated in some other way. While we have seen the types raised from seed very successfully we do not know of any firm in this country which has any considerable number of good stooling plants of *Magnolias*. Why it is so we do not understand, unless it be that the most of the Nurserymen, are like ourselves too young in the business or too ignorant about the propagation of this class of stock to get good stooling plants. So far as our observation has gone all of the leading nurserymen in Holland have their stooling plants carefully planted and as carefully tended, and a crop of young *Magnolias* coming on each year. These stools are planted at a distance of about twelve feet apart. The same is true, as before mentioned, of *Limes*, *Elms*, *Norway* and *Silver Maples* and many other varieties of trees. It is readily seen that when once a specimen tree has been found and the same has been stoolled the entire product will be of uniform excellence.

BY CUTTINGS

The next method of propagation is by cuttings both hard and soft wood. This we believe is the most general method of propagation in this country. A large number of our common shrubs, such as the *Cornel*, *Privet*, *Spiraea* for the most part and many others lend themselves easily to this method of treatment. Hardwood cuttings should be made from wood of the previous summer's growth, cut from the stock plants, after it has thoroughly ripened but before it has been subjected to excessive cold. This wood should be packed away in sand or moss where it will neither rot or become too dry. At the convenience of the propagator the wood can be worked up into cuttings which are usually tied up in bundles of one hundred each, and again packed away when they callous preparatory to rooting, when they are planted in the open.

In latitudes where it is very warm and the soil is light as it is in France it is necessary to plant these cuttings under bell glasses in the field; but we have never seen anyone propagating in that way in this country. It is the general method in France.

There are some varieties that cannot be worked by the hard-wood method. They will only root satisfactorily from soft wood or at least they take most kindly to this method. Such are *Philadelphus coronarius aurea*, the *Forsythia*, *Hydrangea p. g.*, *Weigela*, *Viburnum plicatum* and many more. Here care must be exercised in taking the wood when it is not too soft nor yet too hard. That is when it will break short and crisp like a slender piece of burnt clay; but not when it is so tough as to bend double without breaking. The cuttings should be made larger than many propagators

make them we are convinced,—just as large as they can be made from the wood in hand. They must not be allowed to wilt before or after planting in the frame, which may be with or without bottom heat. On this point there is a difference of opinion. From our observation we don't believe bottom heat necessary. We know one firm which is very successful propagators and think they strongly advocate bottom heat, such as may be had by putting fresh horse manure in the frame pit under the sand. We also know another equally successful propagator who never uses bottom heat and says it is not necessary. His product is just as good as is that of the other firm. When the doctors disagree what are we to do? Judge each man for himself and act accordingly. We are now at the critical point in soft wood propagation; when cuttings have been well made and properly set in the frames. An even temperature of warm humid air must be maintained. Here the genius of the propagator comes into play. Rules only in the most general way can be made. There must be water enough and not too much, sun enough but not too much. And when the rooting process is well underway they must be hardened off by letting in some air, but not too much at first. The eggs in this basket must be carefully watched or the whole will be a failure. We are convinced that this is the point where the genius of the plantsman is tested as nowhere else in the whole round of propagation.

Not every man can be a successful propagator is my firm conviction. A good propagator is a born propagator. Experience perfects him but he is not purely a manufactured product.

It may be necessary to note in passing that certain plants can be most successfully propagated by soft cuttings grown from forced plants under glass. This applies to a few deciduous shrubs and to many herbaceous plants. But the bulk of herbaceous plants are raised from seeds or propagated by divisions.

PROPAGATION BY DIVISION

And this brings us to the simplest of all methods of propagation, by division. Anyone can do this. It requires only a few plants to start with, which can be broken up and planted out, to again become salable plants in three months time.

Incidentally it must be said that a few ornamentals such as *Amygdalis* and a few herbaceous plants like Oriental Poppies and Phlox can most easily and profitably be propagated by root cuttings.

GRAFTING AND BUDDING

The last and final methods of propagation we shall mention are the old methods of grafting or budding. So familiar are these methods to every person present that no word that we can offer will be of interest. One observation we have made in foreign nurseries, especially in Holland, was this: It seemed to us that if a plant could be produced by grafting then grafted it must be, so fond are they of grafting or budding. In this country quite the opposite is true. If a tree can be produced successfully in any other way it is not done by grafting or budding.

THE PRESENT STATUS OF THE WHITE-PINE BLIGHTS

Circular No. 35 of the Bureau of Plant Industry, U. S. Dept. of Agr., on "The present status of the white-pine blights," concludes that the white-pine blight is a complex of several different diseases.

The leaf-blight is the disease which has persisted longest in many localities, and is considered the most important form of blight. As yet its cause is undetermined, but it was much less prevalent in 1908 than in 1907, and many affected trees have partially recovered, while no new ones became diseased.

The twig-blight, caused by *Lophodermium*, while it may occur another season under specially favorable weather for the fungus, yet serious damage from it is not at all common. The other twig blights are transitory and thus far have caused no permanent damage. None of them may occur again the next ten years, or they may recur within one or two years, but probably not. The total damage caused is comparatively slight, only scattering trees having yet been killed. The timber owner should be careful not to confuse trees killed by various other causes with those killed by the blight.

Trees so badly diseased that they cannot recover should be removed from the forest and utilized, but there is no reason known at present for cutting trees that are able to recover or that are healthy.

Obituary

Hermann Wild, for forty-two years a resident of Sarcoxie Mo., died at his residence, Sunday, April 10, of old age. Born in Rosswein, Saxony, Dec. 24, 1824, he left his native country at the age of 20, arriving in New York, from whence he went to Milwaukee, Wis., and in 1848 was married to Miss Maria Haase, who survives him.

One of the early settlers at Sarcoxie, he purchased a tract of land and commenced farming, later establishing a florist business. He was a man of kindly nature and benevolent disposition. Recently he and his wife presented the city with land for a park.

Besides the widow, one brother and six children survive him. He was a member of the Odd Fellows Order for forty years, the body being laid to rest with Odd Fellow honors.

TO THE TRADE

The U. S. Post Office Department has established a Post Office or Nursery, appointing our Mr. S. W. Crowell, Post Master. All future mail should be addressed to us at Roseacres, Coahoma County, Mississippi. We shall be pleased to quote on our usual line of Products—for delivery Fall, 1910—Spring 1911.

Thanking you for past favors, we are

Very truly yours,

THE UNITED STATES NURSERY CO.,

Roseacres, Coahoma County, Miss.

LATEST REVISION OF PROGRAM

**As Arranged by Chairman Hill, April 26, 1910
For Denver Meeting, June 8, 9, 10, 1910**

Address of Welcome, Col. J. S. Irby, representing City of Denver.

Response, Capt. C. L. Watrous of Des Moines, Iowa.

President's Address, F. H. Stannard, Ottawa, Kans.

Report of Secretary, John Hall, Rochester, N. Y.

Report, Treasurer C. L. Yates, Rochester, N. Y.

Report Tarriff Committee, Irving Rouse, Rochester, N. Y.

Report Transportation Committee, W. P. Stark, Louisiana, Mo.

Report Legislative Committee, Chas. J. Brown, Rochester, N. Y.

Report Entertainment Committee, F. A. Weber, Nursery, Mo.

Report Publicity Committee, Thos. B. Meehan, Dresher, Pa.

Report Committee on Exhibits, E. P. Bernardin, Parsons, Kans.

Report Forestry Committee, C. M. Hodges, Bridgeport, Ind.

Report National Council Horticulture, Capt. C. L. Watrous, Des Moines, Ia.

"Publicity Campaigns on part of Nurserymen," J. M. Irvine, of St. Joseph, Mo.

"Varieties," E. S. Osborne, of Rochester, N. Y.

"Orchard Pests still unknown to the Colorado Fruit Grower," Prof. G. P. Gillette of Ft. Collins, Colo.

"Co-operation between Nurserymen and Fruit Growers," W. L. Howard, Sec. Missouri State Board of Horticulture.

"Practical Experiments with Root Gall on Apple Trees," Vice-President E. A. Smith, of Lake City, Minn.

"Transplanted Raspberries for the Retail Trade," W. N. Scarff of New Carlisle, Ohio.

"Should a Young Man Choose the Nursery Business for a Vocation?" A. Willis of Ottawa, Kans.

"Observations upon European Nursery Stock and Their Plant Growing Methods," (illustrated by lantern slides), Prof. Craig of Ithaca, N. Y.

"The Part Nurserymen have taken in the Growth and Development of the Nation," J. B. Morey, Dansville, N. Y.

"Herbaceous Plants," C. S. Harrison, of York, Nebr.

"Magnifying our Craft," E. W. Kirkpatrick of McKinney, Tex.

"A Study of the Nursery Land of the United States," W. H. Stark, Louisiana, Mo.

"The Commercial Side of the Nursery Business," H. W. Marshall of Arlington, Nebr.

"Effects of Tree Planting in the Middle West," Geo. H. Whiting, Yankton, S. Dak.

"Resultant Evils of Replacement Policy," J. W. Mayhew, Waxahachie, Texas.

"Crown Gall and its Effect on Orchard Trees," Peter Youngers, of Geneva, Nebr.

"Is the Organization known as the American Association of Nurserymen a Benefit to the Nursery Business?" E. M. Sherman, of Charles City, Iowa.

"Nurseryman's Peach Seed Supply," C. C. Mayhew, Sherman, Texas.

"Soils and Fertilizers," F. L. Rounsvel, Denver, Colo.

THE FREEZE

Most disturbing reports have come to us from the Middle West during the past two weeks. Such reports would indicate that the prospective fruit crop has been destroyed, that the whole region north of the Gulf lying between the Rockies and the Mississippi River had lost all possibility of furnishing any fruit, either large or small, to the consuming public. It is probable that these newspaper reports have been considerably exaggerated. On the other hand, it is undoubtedly true that this intercontinental region has been again hard hit by the belated cold wave of April. The entire Mississippi Valley and contiguous territory seem to have suffered severely. Michigan, Wisconsin and Illinois have apparently been included. The full extent of the injury is not known at this writing, but unquestionably the loss in orchard fruits, such as apples, plums, cherries and peaches, has been very considerable.

In looking back upon the rather too frequent visitations of this kind one cannot help being impressed by the vast importance of great bodies of water. The Lakes Ontario

and Erie region of New York, Pennsylvania, Ohio and Ontario appear to have escaped with relatively small damage, and this has been the case for many years back. The relative immunity is undoubtedly to be credited to the influence of these large bodies of water, and they emphasize the vast importance of such factors in fruit growing. The coastal climates have in certain respects well pronounced advantages in their greater surety from unseasonable fluctuations of temperature. On the other hand, the intercontinental climates have the advantage which is associated with atmospheric characteristics making for handsome appearance and attractive finish of the fruit. There are few misfortunes which are without their accompanying compensation.

NIAGARA COUNTY NURSERIES

Announcement is made that these nurseries formerly of Geneva, N. Y., have changed their offices and grounds to Wilson, N. Y. Thomas Marks & Co. are proprietors.

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FINE ART IN ADVERTISING

The editor's office is in receipt of a beautiful work of art in the form of a reproduction of the oil painting of "Delicious Apple" by Mr. Ream, exhibitor at the Royal Academy at London, and a contributor to the Stickney Collection at the Chicago Art Institute. The original of this reproduction is the property of Mr. W. P. Stark of Stark Bros. Nurseries & Orchards Co., Louisiana, Mo. The painting depicts a group of delicious apples lying in artistic confusion on a rich velvet background. The painting is neither of the impressionistic class, nor yet does it bring out every character of the fruit in painful detail like an over-timed, over-developed photograph. It is decidedly a work of art, and the reproduction is worthy of a prominent place where works of art of this kind are appropriate. We congratulate the owner on the possession of such an interesting and beautiful trophy, and the painter upon his good judgment in selecting a subject which possesses both artistic quality and desirable advertising ideals.

ON ROOT GALLS

This trouble has aroused unprecedented interest among the nurserymen of the country during the past year or two. It has been the cause of great losses on the part of apple and peach growers. It has been the means of frequent disagreement to the point of suits between buyer and seller, and has now arrived at a state in which a great deal of confusion exists and a great diversity of opinion is maintained on the part of those who ought to know as to cause and effect of these various types of excrescences which appear on the roots of nursery stock. Nurserymen have been accepting the dictum of pathologists and others supposed to understand the character and danger of this form of parasite. Some of the restrictive measures introduced and enforced have been exceedingly drastic and sweeping. They have at any rate aroused nurserymen to the point of taking a hand in the investigational side of the question themselves, and we shall look for a very interesting discussion of this subject at the annual meeting from the standpoint of the nurseryman, who will draw from the book of his own experience data tending to throw light upon the influence of these root knots on the ultimate health, vigor and productivity of the tree. This part of the program will undoubtedly be of the deepest interest and of great importance to nurserymen of all parts of the country.

THE DENVER MEETING

The annual convention of the Society, scheduled for the City of the Rockies, June 8-9-10, promises to be of exceptional interest. Gratifying features in connection with this is the enthusiastic and harmonious manner in which all of the Western, or rather middle west members of the Association are working as a unit for the success of the meeting. The city of Denver is a most attractive place, with a delightful climate, particularly agreeable at that season of the year. It lies in a region of unusual interest to the orchardist and nurseryman, for in

this vicinity the fruit grower may see orchard developments at once instructive and extensive, irrigation enterprises bearing upon fruit growing of impressive dimensions; and within easy reach of the city of Denver are scenic attractions second to none on the continent, and probably in the world.

Let everyone, therefore, who can break away from his work make a special effort to join the pilgrimage from the East and be one of the cheerful gathering at Denver, where he will absorb instruction, new ideas and inspiration, which will send him back to his home with a fresh stock of energy to carry him through the trials of the oncoming year. Members are asked to especially note Secretary Hall's announcement in regard to this convention which appears on another page of this journal.

NURSERY PARASITES

With the opening of the season will come the annual fight against plant enemies. The important question is, are we ready for it? Fully half the battle rests in being prepared for the conflict. The trouble is

that the injury to our trees and shrubs is often inflicted before we realize it, and remedies applied then are of little or no value. All remedial efforts for the suppression of plant parasites should be on the principle that prevention is better than cure. Preventive measures, therefore, can only be effective when applied early enough to act as such.

Among the difficulties of the nurseryman is that in fighting these enemies a somewhat technical training and knowledge is necessary, so that the sprayer should know something of the life history of the parasite to enable him to attack it at its most vulnerable point. The field foreman is usually an exceedingly busy man, and often busiest just at the season this kind of work should be done. If he observes a trouble he is obliged to depute the work of applying the remedy to someone else, who may, or may not apply it efficiently.

Why should not large nurseries maintain their own sanitary expert? A man of this kind would find continuous work in the field during the summer, and could easily be employed in office or packing house during the winter. He should be continually on the alert to discover an enemy and apply the remedy promptly. The salary of such a man would be saved many times within the year in the majority of the wholesale and extensive retail nurseries of the country.

In summing up the weather conditions of the winter the consensus of opinion is that it was of the good old-fashioned type, that it more nearly approximated in the steady cold and heavy snowfall the win-

SEASONAL NOTES

ters of the boyhood days of the older members in the nursery craft than any we have had in recent years. Fortunate it was that with the low temperatures came heavy snowfall. A winter of heavy snowfall is usually followed by a season of prosperity, for the snow is one of nature's most successful methods of furnishing necessary water to the farm crop. Certain it was that the cold, while expressing no unusually low temperatures, was much steadier than usual throughout

the Northeast. The heavy snow blanket obviated any possibility of root injury, which was fortunate.

The spring temperature came on with extraordinary rapidity, and almost phenomenal intensity, during the last days of March and the early days of April. This was succeeded by some nights characterized by stinging frosts, which undoubtedly caught and pinched advanced vegetation here and there throughout the country. Unquestionably the peach crop has been somewhat thinned, but up to this date (April 14) has not been destroyed, contrary reports notwithstanding. Forward grape vines are reported nipped in some parts of the country, but these will recover. In the nature of things we must expect occasional frosts during the month of April in all of the northeastern part of the country. There was remarkably little difference in the condition of vegetation between the North and South on the 5th of April. Deciduous trees in the North were almost as far advanced as they were several hundred miles farther south at the same time. [The heavy freezes of the latter part of April came after the above was written.]

SUMMER USE OF LIME-SULPHUR FOR APPLE DISEASES

The experiments of the past two years in the use of lime sulphur in preventing brown rot of peach and scab of apple seem to indicate that this remedy is likely to replace the standard Bordeaux in combating fungous diseases. Mr. W. M. Scott of the U. S. Department of Agriculture offers the following suggestions for the treatment of diseases of different varieties of apples in Circular No. 54, Bureau of Plant Industry.

"On varieties subject to attacks of apple scab, especially in districts where this disease prevails, use a reliable commercial lime-sulphur solution (registering about 32 degrees on the Baumé scale) at the strength of 1½ gallons to 50 gallons of water or an equivalent strength of the home-boiled solution, with two pounds of arsenate of lead. Spray the trees (1) just before they bloom (after the cluster buds open); (2) as soon as the petals fall; (3) three to four weeks after the petals fall, and (4) nine to ten weeks after the petals fall. This course of treatment is intended for the control of apple scab, codling moth, leaf-spot, and other minor troubles.

"In the treatment of varieties not seriously subject to scab, or in districts where this disease is not prevalent, the application before the trees bloom may be omitted, making only three applications in all.

"On varieties requiring treatment for bitter-rot, the lime-sulphur solution and arsenate of lead may be used in the two or three early sprayings, and Bordeaux mixture (3-4-50) and arsenate of lead in the applications required for bitter-rot, as follows: About nine weeks after the petals fall and at intervals of two or three weeks until three applications shall have been made.

"On such varieties as the York Imperial, Grimes, Ben Davis, Gano, and Wealthy, located in Virginia, West Virginia, Maryland, and other similar sections where these varieties suffer very little, or not at all, from attacks of scab,

the self-boiled lime-sulphur mixture (8-8-50), with arsenate of lead, may be used with complete success. Spray the trees (1) as soon as the petals fall; (2) three or four weeks after the petals fall, and (3) nine to ten weeks after the petals fall. This course of treatment will control the apple leaf-spot, mild cases of scab, and other minor troubles, as well as the codling moth. The advantage of this mixture over the boiled solution is that it is absolutely harmless to fruit and foliage, while the use of the latter is attended with some danger of foliage injury."

Lime-sulphur for summer use may be prepared by boiling 16 pounds of sulphur and eight pounds of lime with a small quantity of water for about an hour; then strain and add water to make 200 gallons of spray; or stock solutions may be prepared according to Stewart's method, as described in Bulletin 92 of the Pa. Agrl. Exper. Station.

Correspondence

THE PUBLICITY COMMITTEE

The editorial on page 551 of the current number of the NATIONAL NURSERYMAN, headed "Publicity Service," strikes me as bringing up a proposition which needs sharp attention.

As I was chairman of the alleged Publicity Committee of the American Association of Nurserymen for several years, and experienced the complete futility of its efforts—due, I suppose, as much to my own incapacity as to the lack of any sustentation, whatever—I can probably speak feelingly in respect to your own troubles in being merely the ornamental head of a merely ornamental organization which has, after all, under modern conditions, no definite functions.

It has been said by some Methodist, whose name I do not know, that a Methodist can either give money, or has to get money. That is, he is either giving to the church or receiving from the church, if he is a good Methodist. The middle ground between these two situations in life is not much wider than the point of a pin, and therefore no one has been able to balance on it to his satisfaction or to the satisfaction of those on either side. Now I conceive that modern publicity is in exactly the same fix. The stuff that anybody prepares that is fit to print will be paid for by any publication that it is fit to print in. If it is not paid for by the publication as literature, and it gets into a publication that is fit to print it, then the interest, person, business or association which puts it out has got to pay for it. There is no middle ground for the kind of publicity which a commercial organization, or, rather, an organization of commercial interests, desires.

The endeavor to inoculate the supposed innocent editorial offices with a homeopathic dose of horticultural literature which shall react to the financial benefit of the secret propagandist of the effort will result in failure, for I can assure you, from some rather definite knowledge, that the editorial offices of all periodicals are not absolutely innocent, and not all of the persons seated on editorial tripods wear green whiskers!

General trade publicity to benefit individual business

organizations is worth having, and it can be had at a price. Witness, for instance, the Hawaiian pineapple campaign; the campaign of the California orange growers; and a dozen others which will occur to your mind. In these cases the business interests involved associate themselves by means of definite contributions in an effort for general publicity to react on all of them, and the effort seems to be a great success, if properly conducted.

There is a function for the Publicity Committee, however, never touched upon, so far as I remember its actions during the twenty odd years with which I have been connected with the Association. Business methods have within the last five years utterly and absolutely changed, so far as effecting sales is concerned. The old-fashioned tradesman who suddenly wakes up to the new-fashioned conditions is in the same lamentable shape as was Rip Van Winkle when he pried his eyes open, unless he has been observing, assimilating and endeavoring to cope with the improved ways in which soap, shoes, corsets and other articles no less essential to human life than nursery stock, have been offered to the public recently.

Now the Publicity Committee, properly constituted and without any appropriation, could, taking a little time, study and recommend for consideration methods of business publicity for nurserymen which would serve to prevent mistakes, to give valuable hints, and really to promote the business interests of the trade.

These observations occur to me at the moment as worth making for the good of an organization in which I cannot conveniently avoid a very hearty, direct and personal interest.

Harrisburg, Pa.

J. HORACE MCFARLAND.

A WORD FROM A NORTHERN NEIGHBOR

EDITOR NATIONAL NURSERYMAN:

We are pleased to advise you that the nursery business for the past year has been good with us and no doubt with all others engaged in this business. The great feature of course, of this year's business is the tremendous rise in price of standard apples. This has caused a good deal of grumbling by customers, because with the wholesale price advanced from fifty to one hundred per cent, naturally the retail had to be advanced also. We notice many American nurserymen sell at fifty dollars per hundred but we have made a compromise with our customers and sell at thirty-five dollars per hundred. Some people who have little or no ability to run a business, except in the matter of cutting rates, have held at twenty-five and thirty cents. With it all, our trade is the largest we have ever had since we went into business, and while filling our retail orders we have been able to wholesale a good many trees to the United States, putting our price down so that they could afford to pay the duty, then have them as cheap as they could buy in the States.

Our opinion is that the business the coming year will be slack. Large orders are not likely to come in at the prices

nurserymen will be obliged to charge. Still, we anticipate doing a fair trade.

Yours very truly,
Welland, Ont. STONE & WELLINGTON.

SPRING LATE IN ALABAMA

EDITOR NATIONAL NURSERYMAN:

We are having a late season; peaches just beginning to bloom. It is unusually dry for this time of the year.

This Spring's shipping is over here.
Huntsville, Ala.

W. F. HEIKES.

March 18, 1910.

EDITOR NATIONAL NURSERYMAN:

I read your article on "Legislation for Sprayers" and I wish to write in opposition to that opinion. Such a law would be an injustice to the farmer and hinder true progress. Such a law would also be a very foolish law in consideration of the existing laws of nature by which we can control all parasites. Our entomologists do not understand the creation of organic life. The proof of this was given us in the recommendation of the Ball Weevil Law in Texas which was then quickly repealed.

Clifton, N. J.

JOHN J. RUEGG.

ILLINOIS

March 19, 1910.

EDITOR NATIONAL NURSERYMAN:

The winter weather was severe, but a heavy blanket of snow kept the ground from freezing to much depth, and spring is now opening up early; in fact, we fear too early. We think that the early freezes last fall, and but little frost in the ground during the winter, while it was intensely cold above the snow, did more injury than most nurserymen realize and some are going to be unpleasantly surprised. All stock is in good demand, especially Shrubbery, Apple and Peach. Prospects for trade are bright.

As far as we know, orchards generally have come through the winter in good shape, excepting young trees not protected, which have been severely injured by rabbits.

Princeton, Ill.

A. BRYANT & SON.

ARSENITE OF LIME

A WARNING TO FRUIT GROWERS

The attention of fruit growers is hereby called to an important matter. If you are planning to use lime-sulfur as a summer spray instead of the Bordeaux Mixture particular care must be exercised in the use of insecticides. Experiments extending over three seasons and conducted by at least five experimenters have shown that arsenate of lead may be used with safety and effectively in lime-sulfur especially where it is used for the spraying of apples in foliage. Some investigators have suggested and some have even recommended the use of arsenite of lime with lime-sulfur on account of its relative cheapness. The recom-

mendations have apparently been made upon insufficient experimental evidence. There has just been issued from the Department of Agriculture at Washington, Bureau of Plant Industry, Circular No. 54 on the "Substitution of Lime-Sulfur preparations for Bordeaux Mixture in the Treatment of Apple Diseases." In this circular, Mr. Scott, the author, makes the following statements in regard to the use of paris green and arsenite of lime in some extensive experiments which he conducted in 1909.

He says, "The commercial lime-sulfur at a strength of 1 to 30 in combination with paris green began to burn the foliage soon after the first application was made, and by midsummer the trees were almost bare. Arsenite of lime was also used with the 1 to 30 solution, and the results were disastrous. The foliage was burned to a crisp and the fruit badly scorched by the first application. Even the new twig growth was killed to a considerable extent."

"According to the information at hand arsenate of lead is unquestionably the poison to use with the lime-sulfur mixtures. Instead of increasing the caustic properties of the mixture, as at first feared, it apparently has the opposite effect to some extent and does not lose any of its insecticidal value by reason of the combination."

"In all the experiments the combination of paris green and the lime-sulfur solution proved to be quite injurious to apple foliage, and in the Arkansas work the combination of arsenite of lime and lime-sulfur was exceedingly injurious."

Growers are therefore warned against the use of anything but arsenate of lead in lime-sulfur for the general spraying except in an experimental way.

H. H. WHETZEL,

Plant Pathologist, N. Y. State Coll. of Agr.

AN EARLY SPRING IN IOWA

EDITOR NATIONAL NURSERYMAN:

It will surprise you to hear me say that the nursery business is over for this year in Iowa. I have been in the business now for thirty years this spring and we never expect to finish our deliveries until the fifteenth of May; but we opened up this spring with shipments on the twentieth of March and as the season has been so forward, we must now stop on account of forward spring conditions. In general, I think, the nurserymen have cleaned up pretty well, but those interested largely in landscape gardening have had a very short and unprofitable season. We would have had at least \$5,000 more business, ourselves, under ordinary conditions.

We received early in the spring one order for 40,000 Apples, 20,000 Jonathan and 20,000 Gano, from an orchard company in Montana. I presume that this was the largest single order handled out of Des Moines during the present shipping season.

We are glad to get a little breathing spell and have time to look over you last issue of THE NATIONAL NURSERYMAN. Remember when you are in the West the next time that the "latch string is out." Call and see us.

Des Moines, Ia.

M. J. WRAGG.

fruit and Plant Notes

THE WILSON STRAWBERRY

This is a remarkable example of the persistence of a variety of plant of short generation like the strawberry. It originated in Albany, N. Y., in 1857. It was very popular between 1870 and 80, and was conceded during that period to be the most profitable and generally successful variety in nearly all eastern strawberry growing sections. It is a recognized fact that Wilson's Albany, as it was known in earlier days, is grown at the present time with a considerable degree of success. It is ranked as one of the desirable canning varieties on account of its firmness and pronounced acidity. Hundreds of varieties have been introduced and lost sight of since this old standard first appeared.

A companion in popularity has been Crescent, still one of the reliable varieties. Among the seedlings of Crescent still planted is Warfield, much esteemed for canning purposes. Interest in new strawberry regions and in new varieties is constantly increasing.

COST OF GROWING ONE ACRE OF STRAWBERRIES

The horticulturist of the Canadian Experiment Farm recently made an inquiry into the cost of growing strawberries in different parts of Ontario and Quebec. The following items entered into the tabulation of expenses:

Rent of land, varying all the way from \$5.00 to \$30.00; Preparation of land, from \$2.50 to \$8.00 per acre; fertilizers, from \$7.50 to \$50.00 per acre; cost of plants, from \$15.00 to \$36.00 per acre; cost of planting from \$3.00 to \$10.00 per acre; cultivation, from \$2.00 to \$30.00 per acre; mulching, from \$4.00 to \$25.00 per acre; picking, packing and marketing expenses, from \$1.50 to \$132.00 per acre.

These figures exhibit remarkable range, and it would seem that in the last item at any rate the same factors were not included in every case. In estimates presented by nine different persons the following details of expense for the first year were presented, showing also a considerable variation for the matter of estimates. The lowest estimate is 3000 boxes per acre, while the highest is 8600 boxes per acre. The following table presents the details:

	1	2	3	4	5	6	7	8	9
Rent of land.....	30.00	10.00	10.00	10.00	10.00	15.00	30.00	6.00	5.00
Preparation of land	5.00	6.00	3.00	5.00	8.00	2.50	5.00	4.00	6.00
Fertilizers.....	50.00	7.50	25.00	25.00	20.00	30.00	22.50	10.00	30.00
Plants	30.00		25.00	35.00	24.00	36.00	15.00	20.00	17.42
Planting	5.00	7.00	3.00	10.00	5.00	7.50	4.50	5.00	6.00
Cultivation.....	30.00	25.00	5.00	25.00	15.00	9.50	25.00	7.00	2.00
Mulching.....	15.00	25.00	4.00	25.00	10.00	16.50	6.00	7.00	12.00
Additional expenses, including crates, boxes, picking and marketing.....	132.00	1.50		100.00	5.00	105.00	15.00	70.00	1.58
Total	297.00	82.00	75.00	235.00	97.00	322.00	123.00	129.00	80.00

Business Movements

The J. Wragg & Sons Company, Waukee, Iowa, has ceased to exist but the old firm is under new management and will hereafter be known as The Central Nurseries, Waukee, Ia.

FROM NEW ZEALAND

We find the NATIONAL NURSERYMAN a most useful and highly interesting publication.
Auckland, New Zealand D. HAY & SON.

IT WILL BE

Accept this subscription with my best wishes that your paper will be a long lived one.
THE TURTLE CREEK NURSERY,
Austin, Minn. J. M. LINDSAY, Prop.

A GOOD EXAMPLE

Enclosed find check which please place to our credit and when this runs out write us for more. We do not want to be dropped from your list and not receive the NATIONAL NURSERYMAN as we could not run our place without it.
Missoula, Mon. MISSOULA NURSERY CO.

DANSVILLE

EDITOR NATIONAL NURSERYMAN:
The season has opened up two weeks earlier than usual here, and considerable stock (grafts and budding stock) has already been planted. Everything came through the winter uninjured and bids fair to start off without any handicap for the growing race.

The retailers have been shipping for a month and report good orders and fine sales. One year stock undug has been generally trimmed and headed, and buds plowed away from and in many instances grubbed away. So you see you can "put Dansville first."
Dansville, N. Y. FRANK M. HARTMAN.

SOUTHERN NURSERYMEN WILL GO TO DENVER

We think there will be a good attendance at the Denver meeting from the South. The season just closing has been a satisfactory one generally to the Southern nurserymen and all of them that we have talked with recently seem to be planning on this Denver trip. We believe it will be a good meeting.
CHASE NURSERY COMPANY,
Huntsville, Ala. H. B. CHASE, President.

THE PERSONALITIES OF FRUITS

Something We Ought to Know About High Quality Apples Early Varieties

JOHN CRAIG

In the Garden Magazine

The apple is the great fruit staple of north temperate regions. As Grindon very truly remarks, "Foremost always among fruits interesting to an Englishman (and we can safely extend the limitation to include English speaking peoples) is the apple." "The apple is of more use and benefit" he says further "to the people of England in general than all the other fruits put together." What is true of England is equally true of Northeastern America. The apple expresses greater variety in color, flavor, and in the uses to which it may be put than any other class of fruit. There is no reason why every landowner in the North East may not have apples the year round for he may introduce himself in July to one of the greatest delicacies of the season in the form of fresh apple sauce made from his Yellow Transparent or Lowland Raspberry while the last of his crisp Northern Spies of the vintage of the previous year are still in cool storage. The good apple satisfies but it rarely cloy. In this respect it stands in sharp contrast to the fruits of the tropics. "Stay me with raisins, comfort me with apples" says an ancient Hebrew. He knew what he was talking about. He knew that the concentrated sweetness of the raisin furnished food in considerable quantities while the eating of an apple only furnished zest for more substantial solids. We cannot absorb all our food in concentrated form no matter how convenient. "Fillin'" or roughage, to use a stock feeder's term, is said to be essential to the digestive processes. Incontestible evidence regarding the comparatively small food value of apples measured by merely gustatory qualities may be easily secured from the scores of youthful harvest hands found in orchard regions during the annual picking season. The orchardist knows that while the consumption of "meller" and prematurely ripened specimens is enormous it does not appear to have the faintest cloying effect upon the appetite of these same youths as they make their tri-daily appearance at the farmer's table. On the contrary the appetite seems sharpened, while digestion is usually in an exceedingly buoyant condition. Isn't this one of the missions of the apple? Take growing children at a time when they are hungry all over, voracious at every pore, and ripe apples are a veritable godsend. This fruit furnishes the necessary physical consciousness of being filled, without the fear of accompanying trouble or subsequent ailment.

HOW MAY WE KNOW APPLES?

The best way, of course, is through frequent communication. Each variety possesses its own individuality. The laborer in the fruit tree nursery soon learns to recognize the

kind which sets its roots deeply in the earth. It "digs hard" he says. The tree agent recognizes some varieties because of their puny growth and small stature. He remembers these because his customers object to them. This is unfortunate, for weak bodies are characteristics of some of our best kinds and so it happens that when marked vigor of tree and low quality of fruit are associated we have a combination which may be looked upon as responsible in large measure for the rapid distribution of some of our distinctly mediocre apples. The nurseryman prefers to sell something which brings immediate satisfaction than to urge upon the customer a poor tree which he receives with protest and harbors under suspicion.

Again the apple picker soon recognizes the varieties which fill the barrel quickly, which are easily separated from the holding spur, which must be handled with care to avoid bruising or which will bear rough treatment without showing it immediately. The packer, too, in his intimate association with the skin of varieties gains such an acquaintance with them that he not only recognizes well marked differences of texture as between varieties but the observant man may detect differences in the same variety attributable to soil as well as climatic influence.

Let us therefore, make it our business to get acquainted with the personalities of apples, know the tree, its likes and dislikes, know the fruit, its beauties, defects, and uses.

EARLY JOE

My earliest memory of apples and orchards are associated with forays upon the single tree of Early Joe in the home orchard in Western Quebec. To my boyish fancy this variety typified all that was delicious and toothsome in an apple. During the windfall season in late August and early September daily, personally conducted excursions by the small boys of the family made the rounds of the early maturing apple trees and attention was always focused upon Early Joe, although other seasonable kinds were by no means overlooked.

Early Joe will always remain an amateur variety. "The Apples of New York" suggests that it is fairly widely known.

What of the fruit? It is small to medium. Who can mention an apple of the largest size of high quality? If this variety lacks uniformity in ripening it makes it up in size and shape. This oblate roundishness is covered with a dull red, laid on in splashes and stripes, warmed up with bright carmine. Like the Early Joe the core is small and the cells

There are certain reasons for this. In order to be generally popular a variety must have vigor, must have certain commercial characteristics, such as productiveness, attractive appearance and carrying quality. The Early Joe is not eminently noted for any of these characteristics. The tree is a rather slow, weak grower. This defect is to some extent offset by its early bearing habit, but again it is handicapped by susceptibility to one of the worst fungus diseases affecting the apple, black spot, or apple scab. This in its most virulent form, dwarfs and distorts the fruit of Early Joe so that it is hardly recognizable, but in these days of spray remedies such diseases as apple scab, while to be taken into consideration, are not to be regarded as absolute hindrances to the cultivation of any variety however susceptible.

Early Joe is of Connecticut origin, although its birth place was in New York, for Connecticut furnished the seed and Ontario county, N. Y., simply the seed bed requisites. It appeared about 1800 and came along with a goodly crop of varieties, for it was of the day and generation of Wagener, Spy and Pinate. These fine varieties appeared in Western New York about the same time and possibly from seed brought from somewhere in the same general vicinity.

While the tree is defective in point of vigor, especially when young, to such an extent that we cannot speak of it in superlatives we can certainly enthuse over the qualities of the apple. Small in size, it is true, and not surpassingly attractive, equally true, but nevertheless suggestive of high quality, in its coat of dull red and russet, the exterior is rather disappointing, to the uninitiated, yet compensation comes when the interior is reached. The yellow, fine grained, crisp, yet tender and juicy flesh, with its rich, sub-acid flavor is agreeable, nay more, satisfying to the very core. As a rule there is little core left, and in the case of boy consumer, "there ain't no core."

Give Early Joe warm gravelly loam, feed it generously, which means not only fertilizing but cultivating, spray it annually, and it will certainly bring pleasure to owner and family and will also not fail to carry satisfaction to the discriminating buyer.

JEFFERIS

Here is another apple of splendid quality, very poorly appreciated. It was over in Chester county, Pa., that the variety originated with Isaac Jefferis something more than a half century ago. There is nothing especially distinctive about the character of the tree. It is simply a typical apple tree, moderately upright when young, later on assuming a round-headed habit. It is reasonably vigorous and not especially afflicted with fungous enemies. The very qualities which disqualify this for commercial uses give it distinctive value for the home garden and the special market grower. Critics say it ripens unevenly. This is true, but when planted for home use a tree which does not ripen all its fruit in the same week is of greater advantage to the small gardener than the one which brings every specimen to maturity at the same moment and exactly on time. The fact that this variety has twenty-five distinct references in

open. The flesh is almost white, of firm, fine, crisp yet tender texture. Its juiciness is a striking feature while its mild aromatic qualities never fail to please. Jefferis is eatable in September. It may be kept until January without difficulty and in good condition. It may be set down as an unappreciated variety, but one which the grower will make no mistake in planting for home use or for a discriminating market.

PRIMATE

In this variety we have a great favorite with housewives in Central and Western New York. It is regarded by them as the king of autumn apples. It is one of the few varieties which has been honored by having had a tablet erected to commemorate the place of its birth. One of the public spirited townsmen of Syracuse, Mr. John T. Roberts, some years ago took the trouble to investigate the history of the variety, and becoming convinced that it had its origin in a certain place in the township of Camillus, Onondaga county, he was instrumental in placing upon the spot a bronze tablet bearing the following inscription: "On this farm, Calvin D. Bingham about 1840 produced the marvelous Pinate Apple, named by Charles P. Cowles. God's earth is full of love to man." This action certainly betokens the right spirit.

The tree is recognized as a moderately vigorous one, of roundish form, fairly hardy. Fruit is of medium size, of rather unattractive whitish yellow color, occasionally bearing a slight blush, but never striped. The flesh is almost white, very fine textured, very tender and juicy, and sprightly sub-acid with pleasant aroma. In the region of its birthplace this variety is in season during August and September. Like Jefferis and Chenango the fruit ripens unevenly and should be picked successively. Beach, in "The Apples of New York" says that it is "moderately long-lived and reliably productive."

If one grows Chenango it is probable that Pinate may be dispensed with, but those who have grown it usually become so much attached to it that they are very loath to be convinced that there are other varieties of this season better or even as good.

CONDITIONS IN KANSAS

Here we have had the warmest March on record and it has pushed everything out far in advance of any former years, cut short our shipping season, and brought the planting on with a rush. It has been an ideal spring for work or we would never have been able to be as far advanced as we are, for help has been very scarce and what we could get has been of a very poor grade.

Parsons, Kans.

E. P. BERNARDIN.

SPECIAL REQUEST

Secretary John Hall desires to have all copy for advertisements in the Badge Book sent in to him by May 15. Will those who have not done so, attend to Membership and Badge Book?

Doings of Societies

ANNUAL MEETING AND EXHIBITION OF THE AMERICAN ROSE SOCIETY

The American Rose Society is steadily growing in strength and influence. This was evidenced by the large and representative attendance of professional rose growers which their eleventh annual convention drew together in the American Museum of Natural History, New York, March 16 to 18.

The exhibit was not as extensive as anticipated, much of the stock being grown locally, and disappointment was felt that rose growers of both East and West had not contributed more liberally, but the quality of the exhibit was of the highest. The Spring exhibit of the Horticultural Society of New York, held jointly with that of the American Rose Society, was a decided addition to the display.

The president in his address to the Society spoke enthusiastically of the widening field of rose culture, its rapid increase in all sections of the country, and the growing demand especially from the South and West. The secretary reported that more inquiries during the past year for information had been received than ever before, and urged the Society to establish a quarterly publication of its own, to be sent to every member and to kindred societies. "A rose for every home, a bush for every garden," is the slogan of this Society.

Boston will be their 1911 gathering place, where the time of meeting will coincide with that of the National Flower Show and of the American Carnation Society, in that city.

About 300 participated in the St. Patrick's Night banquet at the Fifth Avenue Restaurant as guests of the New York Florists Club.

Officers for 1910-11: President, Wm. H. Elliott, Brighton, Mass.; vice-president, Adolph Farenwald, Hillside, Pa.; secretary, Benj. Hammond, Fishkill-on-the-Hudson, N. Y.; treasurer, Harry O. May, Summit, N. J.

AMERICAN PEONY SOCIETY

The 1910 meeting of the American Peony Society will be held June next at Horticultural Hall, Boston, Mass. The exhibition will be held in connection with the regular Peony show of the Massachusetts Horticultural Society; the exact date will be announced later.

Newton Highlands, Mass. A. H. FEWKES, Secretary.

A post card from Rotterdam, Holland and signed J. McHutchison brings the news that that gentleman is "In the land of clogs and dogs again" As announced in the April number he sailed March 30, on the Lusitania. He expects to return the first week in May.

The Denver convention is only one month distant. Have you made your plans to attend? It will be a "hummer."

REPORT OF THE WESTERN NEW YORK HORTICULTURAL SOCIETY

As usual, this excellent report is out in good time. The secretary is Mr. John Hall, also secretary of the American Association of Nurserymen. The report reflects a great deal of credit upon his ability as editor and book maker.

The volume of 240 pages is filled with subject matter of present interest. The stenographic reports of the discussions are full and well rendered. Among the papers of prime importance to fruit growers at the present time is one on the requirements of certain markets and the best varieties of fruit for those particular markets. This is by Samuel Fraser, who was chairman of a committee empowered to make such an investigation. Mr. Fraser's study of the question was exceedingly searching and comprehensive. The results are set forth in this volume. Other papers deal with lime-sulphur, small fruits, peaches, orchard planting methods, and a considerable space is given to a discussion of topics of immediate interest.

The volume is an exceedingly useful one to fruit growers of the State.

COMMITTEE ON EXHIBITS

Arrangements have been completed for the exhibition of such nursery stock, fruits, flowers, hand tools, photographs and printed supplies as are used largely by Nurserymen, and we invite your co-operation and request an exhibit from you. We have not been able to secure space for heavy implements.

The exhibitions held in connection with the Conventions in past years have been a decided success from every standpoint, and the exhibitors were unanimous in their views that they were more than repaid for the expense of sending the exhibits. Several exhibitors took extensive orders right on the ground and reports since received indicate numerous sales made later as a result of such exhibition.

The Association will provide suitable exhibition room for light exhibits and will make no charge for space at Denver. All exhibits must be delivered to exhibition hall free of charge. If you cannot attend the meeting but wish to arrange for placing of same in the hall, the Committee will attend to it for you and see that it is properly packed and returned to you at the conclusion of the meeting. In such cases you will be charged with actual expenses in connection with the handling and drayage. If you wish the articles sold and will place your price on it, the Committee will do its best to sell them for you. Your advertising cards will be placed on the exhibit to the best advantage, but of course, must be furnished by yourself.

If you wish further information, please correspond with the undersigned, as all arrangements must be made in advance, and no exhibits will be accepted or arranged for after June 1st.

Parsons, Kans.

E. P. BERNARDIN, Chairman.

Renew your subscription to THE NATIONAL NURSERYMAN promptly.

THE 35th ANNUAL CONVENTION OF THE AMERICAN ASSOCIATION OF NURSERYMEN

Will be held June 8, 9 and 10, 1910, at Denver, Colorado
Headquarters The Brown Palace Hotel

Secretary John Hall

The Thirty-fifth Annual Convention of the American Association of Nurserymen will be held June 8, 9 and 10, in Denver, Colorado.

In framing this circular letter, we find ourselves practically impelled to follow our predecessor, because of our limited knowledge concerning the miscellaneous items which demand attention. A closer acquaintance with the work and the workers will, if it is so ordained, enable us to exercise more freedom in future secretarial literature.

In making our bow to the membership of this organization, we bespeak your kindly help in our efforts for the success of the coming Convention and the future enlargement of your membership. We are satisfied that there are many nurserymen still to be secured as members, and as a result, a corresponding increase in interest and in influence to be developed.

We ask that each reader of this document resolves to give immediate response. You can if you will. And your doing so will greatly facilitate the work of your secretary in the registration of members and in the compilation and prompt publication of the Badge Book.

THE CONVENTION CITY FOR 1910

Who has not heard of Denver! One of the most beautifully situated cities of the West! Its streets are wide and shady—thanks to the nurseryman; and its residences and public buildings are stately, handsome and attractive. Denver has been appropriately called "The Queen City of the Plains." It commands a magnificent view of mountain scenery, including Pike's, Long's and other noted peaks, perpetually covered with snow. Just the place for the nurseryman, worn out with his winter's campaign and spring delivery and the more exasperating chase after his delivery returns. Take a rest; take your wife or mother or daughter and get into a climate that is "peculiarly serene and healthful."

The Entertainment Committee has been "on the job," and Brother F. A. Weber and his associates have already

arranged a delightful series of events for the ladies and for "us," the most notable of which (subject to action of the Program Committee) will be a sight-seeing trip over the marvelous Moffat Route to Corona—said to be the finest scenic route out of Denver, and one of the greatest pieces of civil engineering in the world. The trip will be a complimentary one to members and their ladies.



Lifting Roses in a Southern Nursery.

HEADQUARTERS OF THE CONVENTION

In order to secure the best, not only your secretary, but Messrs. F. A. Weber, chairman of Entertainment Committee, and Mr. Peter Youngers, a member of the same committee, have made persistent effort. These latter gentlemen, with Mr. A. M. Ferguson of Denver, visited the various hotels, finally selecting the Brown Palace as the one

best suited to the requirements of our Convention. The "Ordinary," writes Mr. Weber, "is a very nice room on the upper floor, away from noise, and with a seating capacity of over 200 persons. We are also offered the free use of a large sample room for light exhibits on same floor as the meeting room, and additional rooms for committees." If a larger assembly room is needed, there is one on the premises.

The Brown Palace is an up-to-date, fire-proof building, and has the usual restaurants, cafes, and other appointments of a first-class hostelry. In submitting the tariff, the manager assures us that every endeavor will be made to see "that everyone in attendance upon your Convention is pleased, not only when they come, but when they settle their bills and leave." That sounds assuring.

Mr. Morse, the manager, sends the following:

RATES EUROPEAN PLAN

Rooms without Bath:

One Person	\$2 00
Two Persons in one room	3 00

Rooms with Bath:

One Person	\$2 50 or \$3 00
Two Persons	4 00 or 5 00

These are the average rooms of the hotel. For other than these prices, at our regular schedule rate for such rooms.

We will furnish free:

Use of Ordinary for general meetings of convention.

One large sample room for exhibits of photos, etc.

Two or three rooms for committee rooms, as requested.

THE BROWN PALACE HOTEL,

C. H. MORSE, Manager.

MEMBERSHIP

To join the American Association of Nurserymen costs Five Dollars. Send that amount to the Secretary the day you receive or read this notice.

THE BADGE BOOK

In answer to the query—"What is it?" we quote from our predecessor, who styled it as "an unique list of the live nurserymen of the country." Not that all the live members of the trade are enrolled. Your name should be therein, if not there already. Every member is given a number immediately his fee is received by the secretary, and his name will appear in the Badge Book. If he be alive to his privilege he will buy a space in the book for his advertisement, thereby arresting to himself the attention of every other member, for his badge contains his registration number, which he will attach to his coat and thus introduce himself to all who meet him at the Convention. You cannot afford to be off the list of advertisers. Primarily, for your own good, and next because this is a grand co-operative concern and deserves the support of all to enable it to successfully prosecute its work.

THE EXHIBITS

For information under this head application should be made without delay to Mr. E. P. Bernardin, Parsons, Kans., Chairman of Committee on Exhibits. Intending exhibitors should WRITE HIM NOW.

ADVERTISING

Advertising in the Badge Book is a privilege extended to members only. The membership fee entitles you to publication of name and address only. Rates for advertising will be found on blank herewith. If you order advertising with membership, send copy with order, as you cannot be assigned a number until space taken is known. If you order advertising and say copy will follow you get a later number than otherwise. Make name and copy clear. This will help to avoid mistakes.

NOW ABOUT HOTEL RESERVATIONS

Take our advice and write at once to the Brown Palace Hotel, Denver, Colo., for your reservation. Read the letter of the hotel manager again and note the more liberal terms for those who are willing to double up. Even the higher-priced rooms will be reasonable on that plan.

RAILROAD ARRANGEMENTS

Our efforts to secure reduced railroad rates have failed. The chairman of the Western Passenger Association writes: "On behalf of the individual lines interested would respect-

fully refer you to the Summer Tourist fares that will be in effect to Denver, Colorado Springs and Pueblo this year, which will be available for your convention.

The Summer Tourist fares referred to are on the basis of \$30 from Chicago, \$26.75 from Peoria, \$25 from St. Louis, \$17.50 from Missouri River points and proportionate fares will be in effect from intermediate points. Tickets will be on sale daily from June 1st with return limit of October 31st, 1910."

A great advantage is gained by above plan—members will not be compelled to return immediately in order to get reduction under certificate plan. Corresponding reductions will be made from Eastern points.

PROGRAM

We are advised by Mr. J. W. Hill, chairman of Committee on Program, that the following gentlemen will appear on the program.

E. S. Osborne, Rochester, N. Y.; Jas. M. Irvine, St. Joseph, Mo.; Professor C. P. Gillette, Fort Collins, Colo.; Professor W. L. Howard, Columbia, Mo.; Vice-Pres. E. A. Smith, Lake City, Minn.; W. N. Scarff, New Carlisle, O.; A. Willis, Ottawa, Kan.; Professor John Craig, Ithaca, N. Y.; J. B. Morey, Dansville, N. Y.; C. S. Harrison, York, Neb.; E. W. Kirkpatrick, McKinney, Texas; W. H. Stark, Louisiana, Mo.; H. W. Marshall, Arlington, Neb.; George H. Whiting, Yankton, So. Dak.; J. R. Mayhew, Waxahatchie, Texas; Professor E. P. Taylor, Columbia, Mo.; Peter Youngers, Geneva, Neb.; E. M. Sherman, Charles City, Iowa.

JOHN HALL, Secretary,
204 Granite Bldg., Rochester, N. Y.

Personal Mention

FELIX AND DYKHUIS

The pleasure of a visit from Mr. J. Dykhuis, representing Felix and Dykhuis, Boskoop, Holland was accorded us April 26. Mr. Dykhuis is on his annual tour of the wholesale nurseries of the Eastern States. Several days were spent in Rochester renewing old acquaintances and tending to the usual business matters. Anyone interested in communicating with Mr. Dykhuis can reach him Care of Messrs. Maltus and Ware, 14 Stone Street, New York City. Mr. Dykhuis represents a splendid type of the progressive Foreign Nurseryman. He sails for Holland about June 1.

Mr. August Rölker, 31 Barclay St., New York City, is one of the Nurserymen who always calls upon us when in Rochester. His interesting and agreeable personality adds charm to his conversation while his items of information make his visit valuable to us. Mr. Rölker was last in this city Friday, April 23. He is always a most welcome caller.

Treasurer Yates is completing arrangements for a special car or cars from Rochester and Buffalo to Denver, via St. Louis.

**PROPOSED RAILROAD SCHEDULE FOR THE DENVER
CONVENTION. SUBJECT TO SPECIAL TRAIN
ARRANGEMENT**

Eastern members desiring to come by way of St. Louis, will arrange to reach here as early as possible on the morning of the 6th of June—leaving time, via Colorado Limited over the Burlington Route 2:15 P. M.

In order to give Eastern, South Eastern, and Southern members a list of the leading trains with their scheduled arriving time at St. Louis, Mo., I mention the following:

No. 11 Big 4 is due in St. Louis at 1:45 P. M.

No. 43 Big 4 is due in St. Louis at 7:30 A. M.

No. 13 Penn. Line (St. Louis Special) is due in St. Louis at 8:30 A. M.

No. 92, L. & N. Limited is due in St. Louis at 1:25 P. M.

No. 204 I. C. Dixie Flyer is due in St. Louis 7:30 A. M.

No. 208 I. C. Seminole Limited is due in St. Louis at 8 A. M.

The leaving time of these trains from your point can be easily ascertained from your nearest ticket agent. The following is a list of the Passenger Agents of the Burlington Line at the more prominent junction points:

Chicago, Ill.—H. A. Cherrier, Genl. Agt., 211 Clark St.

Burlington, Iowa—M. M. Reno, Dis. Pass. Agt.

Hannibal, Mo.—J. E. Hollingshead, Genl. Agt.

Kansas City, Mo.—H. S. Jones, S. W. Pass. Agt., 823 Main St.

St. Joseph, Mo.—A. E. Martin, City Pass. Agt., 6th & Edmond Sts.

Omaha, Neb.—J. B. Reynolds, City Pass. Agt., 1502 Farnam St.

St. Paul, Minn.—F. M. Rugg, N. W. Pass. Agt., 5th & Roberts Sts.

Minneapolis, Minn.—J. F. McElroy, City Pass. Agt., 728 Olive St.

Minneapolis, Minn.—J. F. McElroy, City Pass. Agt., 3d & Niccolet.

St. Louis, Mo.—J. G. Delaplaine, City Pass. Agt., 728 Olive St.

Arrangements for through tickets, and reservations can be made at any of the above named points, or with your nearest agent. All roads will sell through tickets to Denver. Please have them read over the Burlington, and arrange your leaving time, so as to make connection with our St. Louis Train, which is No. 13.

Members going by way of Chicago, Ill., will leave Chicago on Burlington Train, No. 9, leaving 9:45 A. M. June 6th; consolidating with the St. Louis Train No. 13, at Oxford Junction at 8:25 A. M. on morning of the 7th; arriving Denver 4:05 P. M. same day.

Members coming by way of Kansas City can leave Kansas City on Burlington Train No. 13, 9:30 P. M., June 6th; consolidating with St. Louis train No. 13 at St. Joseph, Mo. at 11:25 P. M.

Members coming by way of Omaha will arrange reservations, so as to take No. 9 out of Omaha, leaving at 11:25 P. M. June 6th.

**FELIX and DYKHUIS
BOSKOOP, HOLLAND**

ROSES

**Large stock of Polyantha (Baby) Roses and Climbing
Roses, either on own roots or grafted on Canina**

**A Full Line of Hardy Nursery Stock
Price List Free**

WHY SPRAY AT ALL

When the work can be done much easier by applying LAFER INSECTICIDE on the soil around the tree, being absorbed by the roots inoculating the sap, the scale and insects will be destroyed. Free Pamphlet. Address

**J. W. LAFER, Sta. B., R. F. D. No. 2, Box 2A.
Toledo, Ohio**

Notice to the Trade

Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

R. DEN OUDEN & SON

The Old Farm Nurseries

BOSKOOP, HOLLAND

PEONIES

ONLY BY THE WHOLESALE

Let me send you my list of OVER ONE HUNDRED Best Varieties
J. F. ROSENFELD, - - - WEST POINT, NEBR.

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor

(Successor to Blair & Kaufman)

Reliance Building., Kansas City, Mo.

Offer for SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

PEACH SEED

We now have in stock VIRGINIA NATURAL PEACH SEED crop 1908, can fill any size order.

**VIRGINIA NATURAL PEACH SEED CO.,
4th Ave. & Clinton St., BALTIMORE, MD**

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

**ALL NURSERYMEN SHOULD BE INTERESTED IN
COMMERCIAL FERTILIZERS**

The American Fertilizer is a fortnightly magazine, devoted exclusively to the fertilizer industry. Sample copy free.

Subscription and Advertising rates upon application

THE AMERICAN FERTILIZER

**WARE BROS. COMPANY,
Publishers**

**PHILADELPHIA
PA.**

Publishers of The American Fertilizer Hand-Book

All "Nurserymen Special Cars" will be consolidated at Oxford Junction on the morning of June 6th, thus giving us a daylight run together through Western Nebraska, and Eastern Colorado.

It would be advisable for as many as possible to make reservations at the leading junction points above mentioned, so that the various cars containing delegates can be handled so as to make connections at the proper points.

The meeting place in St. Louis for incoming delegates will be at the Burlington Offices at 728 Olive St., up to 12 M. June 6th. After this time near the Information Bureau Union Station. A committee of St. Louis Nurserymen will be glad to meet you all, and assist you in any way possible.

Hope the above arrangements will be satisfactory to the majority of the Nurserymen, and that we will see a large delegation here on the morning of the 6th. Reservations for the St. Louis Sleepers can be sent to F. A. Weber, Nursery, Mo., or to J. G. Delaplaine, City Pass. Agt. Burlington Route, 728 Olive St., St. Louis, Mo.

F. A. WEBER,

Chairman Entertainment Committee, A. A. of N.

NOTES FROM GEORGIA

It has been unusually cold this winter. The lowest, so far, at Augusta, was 12 above, but as all nursery stock was thoroughly hardened, no perceptible injury has been done. A few one year figs which grew late in the fall were nipped.

The truck gardener had much young stuff injured and replanting was necessitated.

As far as we have observed, there is no injury to the peach buds. The orchards which have been given proper care and attention show a heavy lot of bloom buds, but unfortunately many orchards in the state have been badly neglected for the past two or three years and in consequence these orchards are in bad shape.

Now that The Georgia Fruit Exchange has the peach business so well in hand and the showing made by the Exchange last year, this has put new life in the peach business and many new orchards have been planted this year.

During the holidays, there was a lull for a few days, but the spring rush is now on and the demand for nursery stock is generally good.

Apples are being planted in large quantities in the Piedmont section of Georgia. Ornamental trees and shrubs are moved in larger quantities. Much attention is being given to the improvement of private places and Parks in the South.

R. C. B.

ICE

"The manufacture of ice is a comparatively new industry, and its growth has been remarkable. In 1870, the industry had hardly made a beginning. But in the thirty-five years from 1870 to 1905, the number of establishments engaged primarily in the manufacture of ice for sale increased from 4 to 1,320; their combined capital, from \$434,000 to \$66,592,001; the average number of wage earners, from 97 to 10,101; the wages paid, from \$40,600 to \$5,549,162; the cost of materials, from \$82,165 to \$6,011,325; and the value of products, from \$258,250 to \$23,790,045. These figures show that the industry has now passed far beyond the experimental stage."—*Cold Storage and Ice Trade Journal*.

100,000 Apple. 1 yr, 4 to 5 ft. and 5 to 6 ft., for Fall 1910. We grow the finest 1 yr apple in the world. Figure with us.

A. L. LUKE, Wynnewood, Okla.

In order that a journal may be prompt, its advertisers must send new copy, orders for continuances or discontinuances promptly on receipt of notice. It only takes you a minute.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel

INDIANA HARBOR, IND.

GRAPE VINES A SPECIALTY T. S. Hubbard Company

FREDONIA, N. Y.

ESTABLISHED 43 YEARS

We offer for Fall and Spring trade a large and complete stock of one and two year old **GRAPE VINES** in strong grades for nurserymen and dealers trade.

We also have an extra nice stock of one year **CURRENTS**. Send us your want list for prices.

WE make a specialty of collecting accounts for the Trade.

For particulars and references, address the

National Florists' Board of Trade,

56 Pine Street - - - - - New York City

Surplus Stock, Spring 1909

50,000 PEACH TREES, 1 yr. from bud.

10,000 APPLE, 1 yr. from bud.

100,000 STRAWBERRY PLANTS in six leading sorts.

MYER No. 1, AROMA, STEVEN'S CHAMPION.

Superior. Gandy.

A general assortment of other stock.

D. S. MYER & SON,

Bridgeville, Del.

CAROLINA POPLAR

BOX ELDER

CALIFORNIA PRIVET and CATALPA SPECIOSA

ALL ONE YEAR OLD

For further particulars and prices, address

SOUTHWESTERN NURSERY COMPANY

C. M. REDMOND, Gen'l Mgr.

Okemah, Okla.

Easterly Nursery Co., CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS. Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

THE LEGISLATIVE COMMITTEE REPORT ON THE INSPECTION BILL

The NATIONAL NURSERYMAN,
Rochester, N. Y.

As Chairman of the Legislative Committee, having charge of the matter of the federal inspection bill regulating importations of nursery stock, I beg to report to the members of the Association that a hearing was granted by the House Committee on Agriculture at Washington on April 27th and 28th, and your Committee appeared at the hearing, and made the strongest arguments possible—

1st. Against the bill.

2nd. Suggesting some amendments and modifications if it were determined by the Committee that some legislation is necessary.

The principal objections raised by your Committee were against that provision of the bill authorizing the Secretary of Agriculture at any time in his discretion to prohibit importations of nursery stock from any foreign country or district, for it was felt that we could not submit to the proposition of placing the control of seedlings, the raw material of the nurserymen, in the hands of any one government official.

It is hoped that the bill may either be defeated or modified so that we can do business. The House Committee took the matter under consideration, and have not rendered their decision.

Your Committee thinks it advisable that each and every nurseryman in the country write immediately to the Hon. Charles F. Scott, Chairman of Committee on Agriculture, House of Representatives, Washington, D. C., protesting in the strongest terms against the adoption by his Committee of House Bill No. 23252, on the special ground that the power and authority granted by the quarantine section No. 8 is liable to grave abuses, and that the nursery interests of the country do not feel safe in placing in the hands of any federal official such absolute control over the seedlings, the raw material of the nurserymen, from which fruit trees are produced. Prompt action on the part of every nurseryman of the country will reach the Committee in time, and should have great influence.

Your Committee hopes to report more definitely in a short time.

The members of the Committee at Washington were: Wm. Pitkin, Chairman, Irving Rouse, Abner Hoopes, W. P. Stark, John H. Dayton, G. L. Holsinger representing the American Association of Nurserymen, and Thomas B. Meehan, W. H. Moon representing the Pennsylvania Association of Nurserymen, and John B. Morey, representing the Dansville Association of Nurserymen.

Yours truly,
WM. PITKIN.

CUSTOMS FRAUD

Jaes Smits, a florist, of Holland, was arrested in New York, by United States Marshal Henkel, April 20, charged with presenting false consular invoices on importations of Blue Spruce, Japan Maples, and Rhododendrons. The invoices valued the consignment at \$163. The customs authorities said this was too low. Smits pleaded not guilty to Commissioner Shields and was held for examination on Saturday. *Florists' Exchange.*

A Competent Propagating Foreman wanted at a reliable Nebraska nursery. Address "Propagator," this paper.

WANTED

A competent foreman who understands all field and inside work, budding, grafting, etc. Should have knowledge of all lines of work pertaining to the business and ability to handle men. Address "NEBRASKA," care of National Nurseryman.

WANTED

10 experienced budders, June 1st to 15th to bud Apple and Peach. Good location, comfortable quarters. Men from 19 to 49 years of age who are not afraid of work.

Address O, care NATIONAL NURSERYMAN
Rochester, N. Y.

WANTED OFFICE MAN. One who can secure and successfully handle nursery agents through correspondence. Apply by letter only, stating age, extent of nursery experience, compensation and whether can operate Underwood typewriter. Also give any other information that may assist in passing on application. Communications confidential. PERRY NURSERY CO., Rochester, N. Y.

WANTED

A position as Sales Manager by a thoroughly competent man who has had 20 years experience in the Retail Nursery business. Have worked through every department. Am capable of assuming full charge of an office at once. Best of references.

Address, "SALESMANAGER," care National Nurseryman.

FOR SALE

Well equipped Nursery Plant with good, thriving retail business in the heart of Michigan Fruit belt. For particulars write "EQUIPPED" NATIONAL NURSERYMAN.

FOR SALE--Western Nursery

Forty acres of deeded and forty acres of leased land. Stock all salable size; clean and healthy; not a scale or bug. Trade has almost doubled each year. We ship 5 to 12 hundred miles west and north of us. Trade to be supplied unlimited. We have a complete general line of Nursery Stock. We do a strict catalogue business. Are well advertised and have a good name.

Will sell for cash, or part cash and time on balance to a man who knows his business and is a pusher. This is a good investment and will pay a good dividend. Address

"NURSERYMAN"

care of NATIONAL NURSERYMAN, this office.

Book Reviews

A GUIDE TO THE COUNTRY HOME. By Edward K. Parkinson. 5 1/2 x 7 3/4", 151 pp., illust. The Outing Publishing Co. Price \$1.

This is in effect a brief outline describing the factors to be considered in the choice of a country home. It gives directions for the outfitting, arrangement of buildings, stocking the barns, management of the soil, crop rotation, etc. All phases of the subject are treated in an entirely untechnical manner. It leaves out of consideration relatively unimportant matters, treating the supposed important in a direct, didactic manner. Of course it is impossible within the scope of such a small work to cover such a broad field in an adequate manner. The book, therefore, is to be regarded as suggestive and not by any means complete. Our country is too large and too varied in its soil and climatic conditions to admit of the covering of the whole ground in a satisfactory manner in our small volume. It is, however, an excellent guide for the beginner who will gain much information of immediate value.

BARRY ON THE LILAC

William C. Barry of the Mount Hope Nurseries, Rochester, N. Y., has published in a booklet his interesting essay on "The Lilac," reprinted from *Horticulture*. The fine and dainty make-up of the booklet is suggestive of the fragrance and delicacy of the flower.

INCORPORATED

Hamilton, Montana.—Bitter Root Valley Nursery Co., capital stock \$200,000. T. H. Hanbridge, S. P. Kerr and G. I. Watters, directors.

San Francisco, Cal.—California Ladies' Flower & Plant Co., capital stock \$75,000. The company is to be managed entirely by women.

Oroville, Wash.—East Oroville Orchard Co., incorporated, capital stock \$40,000. A. P. Murray, L. I. Work and C. S. Barns, incorporators.

Hoboken, N. J.—Henry Nungesser & Co., capital \$50,000. Incorporators Henry Nungesser and Geo. S. Mittendorf of New York and Wm. A. Proescholdt of South Orange, N. J.

Nashville, Tenn.—Tennessee Pecan Co., nursery, capital \$50,000. Incorporators, H. G. Baker, Masterson & Peyton, John D. Benedict, J. Sam Morton, T. J. Collins, J. R. Young, W. W. Baird and A. R. Doddson.

New York, N. Y.—A corporation to deal in flowers, seeds, etc., under the name of "Buds" capital stock \$5,000. Incorporators, Carl R. Gloeckner of Jersey City, N. J.; Wm. F. O'Connor and Wm. H. Siebrecht, Jr., of New York.—*Horticulture*.

NURSERY DEVELOPMENT

City Nursery.—The city of Seattle, Wash., is considering the establishment of a nursery for growing plants for its own parks and public places.

Fremont, Nebr.—Nursery operations are extending rapidly in this place. G. L. Welsh & Co., have added to their ground some 17 acres of land.

Kennewick, Wash.—A large nursery in the Columbia River valley is to be established by the Van Holderbeek Nursery Co., which has recently purchased 80 acres of land at Kennewick Highlands.

Marysville, Calif.—The Marysville Flower & Seed Co., have added to their holdings 20 acres of land, on which a greenhouse will be built and nursery stock grown.

H. W. Jenkins, Boonville, Mo., is no longer engaged in a general nursery business but is giving his attention to growing berries, berry plants and flowers such as Cannas and Gladioli. The tree nursery under the name of "Walnut Hill" has been discontinued.

Clematis Paniculata

Strong Plants in Quantity.
Lowest Prices.

F. A. BALLER, Bloomington, Ill.

Waxahachie Nursery Company

J. R. MAYHEW, Pres.

Growers of high grade Nursery Stock. Very large surplus for Fall 1910 and Spring 1911. Solicit a share of your patronage.

Waxahachie Nursery Company,

WAXAHACHIE,
TEXAS.

ROSES TO LINE OUT

200 Standard and New Sorts
in 2 1-2 and 4-inch Pots.

THE LEEDLE FLORAL COMPANY®
SPRINGFIELD-OHIO.

FOR SPRING OF 1910

We have our usual supply of NURSERY STOCK

We still have a few hundred thousand Scions to offer

John A. Cannedy Nursery and Orchard Co.

Carrollton, Ill.

California Privet Fruit and Shade Trees Evergreens

SAMUEL C. DE COU

Moorestown, Burlington County, N. J.

ESTABLISHED IN 1897

EM. Van ESPEN, President

CENTRAL PHOSPHATE COMPANY

Miners of High Grade Florida, Tennessee and South Carolina Phosphate; TENNESSEE RAW GROUND
PHOSPHATE ROCK, all grades

Address

MT. PLEASANT, TENNESSEE and 18 CHAUSSEE D'ANTIN, PARIS, FRANCE

IVY, English, pot grown plants, 4-in. pots, 3 ft. long, 3 to 5 branches, also

VINCA MINOR, field-grown clumps in any quantity.

Address

A. L. MILLER,

FLORIST AND NURSERYMAN

Jamaica Ave., opp. Schenck, Brooklyn, N. Y.

HEDGE 200,000 CALIFORNIA PRIVET 200,000 HEDGE
250,000 AMOOR RIVER PRIVET 250,000

We also have 150,000 each in California and Amoor River in 6 to 15 inch for lining out. These are well rooted plants and will make fine stock for delivery next fall.

VALDESIAN NURSERIES

Bostic Department

BOSTIC, NORTH CAROLINA

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

JAS. H. BOWDITCH

903 Tremont Bld.,

Boston, Mass.

INTELLIGENT SPRAYING

The Rural-New-Yorker stated editorially, Sept. 19th, 1908:—"The Rural Grounds now appear to be free from scale for the first time in twelve years. * * * It has been a long fight, excessively discouraging until the soluble oils came to the rescue years ago. The prospect brightened at the first trial of these handy preparations, and repeated use seems to have resulted in victory." Spraying was omitted this year."

"SCALECIDE"

alone did more in three years than Lime-Sulphur and other "dopes" did in nine.
Are you still in the Lime-Sulphur ranks?

PRICES: In barrels and half barrels, 50c per gallon; 10 gallon cans, \$6.00; 5 gallon cans, \$3.25; 1 gallon cans, \$1.00
Send for Booklet, "Orchard Insurance" If you want cheap oils, our "CARBOLEINE" at 30c. per gallon is the equal of anything else
B. G. PRATT CO., MFG. CHEMISTS, 50 CHURCH ST., NEW YORK CITY

ROSES - SHRUBS - CANNAS - PHLOX
JAPANESE IRIS - HERBACEOUS PAEONIES

ALL FIELD GROWN

Teas, Hybrid Teas, Hybrid Perpetuals, Mosses, Rugosas, Climbers, Ramblers Creepers. Thirty Types. Over Three Hundred Varieties.

Planting for the season of 1910 is the heaviest in our history. Varieties are the BEST and QUALITY is there, better than ever before.

We want to figure with you Mr. Nurseryman on your future orders. We have the goods—QUALITY—QUANTITY—VARIETY—and can make the prices! Your correspondence will get "quick" action.

The United States Nursery Co.

ROSEACRES, Coahoma County, MISS.

Osage Hedge, One Year Extra Fine

Grown for us at Rossville, Kansas on deep sandy soil. Famous for fine roots.

This Osage Hedge in Car Lots, cannot fail to please. BLACK LOCUST, RUSSIAN MULBERRY, HONEY LOCUST.

SPECIOSA CATALPA, Selected seed, guaranteed pure, our specialty for past ten years, grown by the million.

FANCY SHADE TREES CAR LOTS. Ash, Box Elder, Black Locust, Catalpa Speciosa, American White Elm, Soft or Silver Maple.

The Winfield Nursery Co.

(INCORPORATED)

J. MONCRIEF, Pres.

R. I. LEMON, Sec'y-Treas.

WINFIELD, KANSAS

GRAPE VINES

And small fruits for wholesale trade

Our Grape Vines were never planted under more favorable conditions than this season and we feel sure we can promise equally as fine growth as former years. Good strong roots and tops, just what you want for your retail trade. Give us a chance to quote on your wants, It will PAY you, SATISFACTION GUARANTEED.

WILLETT & WHEELOCK

NORTH COLLINS, N. Y.

J. H. SKINNER & CO.

Station "A," Topeka, Kansas.

Fruit, Shade and Ornamental Trees

∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

ESTABLISHED 1868

F. W. MENERAY

Crescent Nursery Co.

COUNCIL BLUFFS, IOWA

We offer our large stock of PAEONIES at a special low price for and Spring 1910. Also a large stock of Cherries, Plums, Pears, Gooseberries, Deciduous Trees and Ornamental Shrubs.

SPECIAL ATTENTION—Complete list to dealers in car-load lots.

Andre LeRoy Nurseries

ANGERS, FRANCE

ESTABLISHED 1780

BRAULT, Director

Will be prepared in the latter part of May to book orders for Forest Seedlings, Ornamentals, and a general line of Nursery Stock of their own growing, grading and packing, conforming to the high standard of excellence which has made the reputation of this firm in the half century covered by their shipments to the leading importers in the United States.

For Quotations apply to

ANDRE L. CAUSSE, Sole Agent,

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NURSERIES AT USSY, CALVADOS, FRANCE

A general assortment of Fruit Tree Stocks, such as Apple, Pear, Myrobolan Plum, Mahaleb and Mazzard Cherry, Angers Quince, etc. Forest Trees, Ornamentals, Evergreen Seedlings, Roses, etc. The largest stock in the country. Prices very low. The very best grading and packing. Send for quotations before placing your orders elsewhere. Catalogue free.

Sole Agents for United States and Canada. C. C. ABEL & CO., 110-116 Broad Street, NEW YORK.

W. T. HOOD & COMPANY

Old Dominion Nurseries
RICHMOND, VA.

We offer

CALIFORNIA PRIVET, one year extra fine
ASPARAGUS, one year
BARTLETT STANDARD PEARS, 2 year, nice stock
CHERRY, 2 year, strong, extra fine, sour varieties
HEMLOCK SPRUCE, mostly 3 to 4 feet
NATURAL PEACH PITS, crop 1909

Write for prices

Budded Pecan Trees

Japan Persimmon, Japan Walnut,
and Muscadine Grape Vines . .

Are Leaders to the Trade this Year.

We also offer a general line of Nursery Stock, including Fruit and Ornamental Trees, Shrubbery, Field-Grown Roses, Etc., Etc. Prices always right.

THE GRIFFING BROS. CO.,

JACKSONVILLE, FLA.

Trees That You Can Sell "On Honor"

Your professional reputation depends upon the trees you sell. An order of "named" trees that turn out to be something else will often do you untold injury. Doubtless you have often found it difficult to secure "true-named" specimens, which require to be grown in the South. But here is a satisfactory solution of this difficulty: Trees from

Glen Saint Mary Nurseries

are true to name, and you can sell them "on honor." Our system of growing and grading, and the rigid test every variety gets in our Trial Orchards, keeps up a standard that few Nurseries can approach. Large orchards now in bearing throughout the South prove the excellent quality of our trees. Full particulars, Catalog and Wholesale Price List mailed on request.

Glen Saint Mary Nurseries Co., Glen St. Mary, Florida

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ROCHESTER, NEW YORK

SAN-U-ZAY SCALE OIL

CONTAINS NO ACID, AMMONIA, SOAP OR ANY
CAUSTIC MATERIAL

Can be used as a summer spray in nursery work.

Costs about half the cost of other sprays.

25 years' experience in the manufacture of soluble oils, back of our product.

WRITE FOR OUR PRINTED MATTER

Gives in full, Scores of Reports

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Hydrangea Arborescens Grandiflora Alba

the true large flowering forcing variety, warranted true. 2 1/2 inch pot plants; 18 to 24 inch strong field grown plants. New trade list ready. Write for it today.

THE GOOD & REESE CO.,

The Largest Rose Growers in the World,

SPRINGFIELD, OHIO.

PEACH BUDS!

Twenty-five Leading Commercial Varieties
from our new plant, ready for June budding

CUT RIGHT PACKED RIGHT
AND THEY ARE ALL RIGHT

Ask for list

The Greenbrier Nursery Co., Inc.
Greenbrier Tenn.

E. T. DICKINSON,

CHATENAY SEINE, FRANCE.

Grower and Exporter of

French Nursery Stocks, Dutch Bulbs, Gladioli, Etc. Fruit Tree Stocks. All grown for the American trade.

PEAR AND CRAB APPLE SEED,

The most complete assortment of Ornamental Stocks,
Trees and Shrubs.

Geo. E. Dickinson, 1 Broadway, N. Y.

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ORNAMENTAL STOCKS

NURSERIES
420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for **WHOLESALE**
CATALOGUES

TRANSON BROS. & D. DAUVESSE'S NURSERIES,

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BARBIER and CO., Successors,

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WHOLESALE SEEDSMEN

at GROSSTABARZ, Thurigia, GERMANY

are prepared to accept contracts on the following
Specialties for

DELIVERY FALL 1910

FRESH SEEDS of MULBERRY, WILD CHERRY,
MAHALEB CHERRY, PLUM, QUINCE, APPLE,
PEAR, DOG ROSE, BLACK AND HONEY
LOCUST and many other sorts.

Price List on application
WANTED: American Evergreen Tree Seeds
Offers will oblige

Vincennes Nurseries

W. C. REED, Prop., - VINCENNES, IND.

OFFER FOR FALL 1910

Cherry 2 Year in Car Lots

Cherry 1 Year in Car Lots

Our Cherry promises very fine both in 1 and 2 year.
Also general line of other Nursery Stock.

Cherry Buds to offer in any quantity in season ready
to cut July 1st.

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FRUIT AND SEED FARMS

OFFER for Spring 1910

GRAPE VINES—One and two years old. Varieties
largely Moore's Early, Concord and Niagara.
Also Scarlet or Crimson Clover Seed and Cow Peas.
Free from weed seeds, all cleaned and guaranteed
first class.

Correspondence solicited. Price list upon request.

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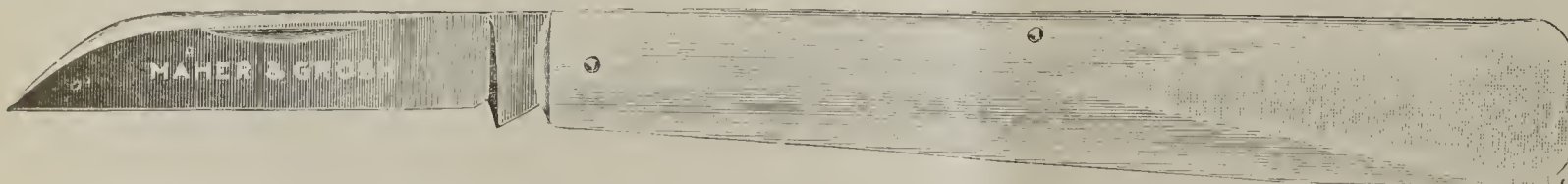
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10-gal. keg making 1,500 gals. Spray; delivered at
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Prompt shipments. Write to day for full information.

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BUDDING KNIFE No. 94. Sample by mail, 25c; 6 for \$1.25.



PROPAGATING KNIFE No. 89 1/2, 50c. Blade Closes. You have paid 75c for a much poorer knife.

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Hand Forged Razor Steel Warranted

Nursery Pruner, 50c
Pocket Pruner, 60c
Pocket Budder, 35c
Pocket Grafter, 40c

We solicit Direct
Trade

Send for 12-page Special
Nursery Catalogue.

FOR SPRING 1910

We have the largest and most complete assortment of Ornamental Trees, Shrubs and Herbaceous Plants we have ever grown. Also Tree Seedlings in large variety.

We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

The Willadean Nurseries
WARSAW, KENTUCKY.

DREER SPECIALS

Hardy Perennials, Paeonies, Iris, Hardy and Tender Water Lilies and Aquatics, Hardy Vines and Climbers, Decorative Greenhouse Plants, Palms, Ferns, Ficus, Araucarias, etc.

Bay Trees and Trained Box Woods, Hardy Rhododendrons, Azaleas, etc.

Flower and Vegetable Seeds, Bulbs, Implements, etc.

Wholesale catalogue issued quarterly and sent to the trade only. Write for a copy.

HENRY A. DREER, PHILADELPHIA, PA.

Northern Grown Nursery Stock

We Grow a General Assortment of Trees, Shrubs, Vines, Roses and Herbaceous Perennials, Etc.

Prices Reasonable. Wholesale Trade List for the Asking.

The Bay State Nurseries, North Abington, Mass.

Charles Detriche, Senior
ANGERS, FRANCE

Grower and Exporter of Fruit-Tree Stocks, Forest Tree Seedlings, Rose Stocks, Shrubs, Vines, and Conifers for Nursery Planting.

For all information as to Stocks, prices, terms, etc., address

JACKSON & PERKINS CO.
(SOLE AGENTS)
NEWARK, N. Y.

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California Privet

EXTRA STOCKY PLANTS, 2 YEARS

They go quick at bargain prices.

ARCADIA NURSERIES
Monticello, Florida

PEACH SEED

I have about 50 bushel 1909 crop of Natural Pits in perfect condition that I can yet spare. First order gets them.

JOHN A. YOUNG
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Handbook of the Trees of the Northern United States and Canada East of the Rocky Mountains

Photo-descriptive. By Romeyn Beck Hough, author of "American Woods." Profusely illustrated from photographs of leaves, fruits, winter twigs, typical barks of each species, magnified wood structures of principal species, and maps indicating distributions. 470 pp. (7x9 1/2). Price \$8 to \$10. Express prepaid.

Sample pages and particulars furnished on request.

We thoroughly recommend this book. It is worth more than its price.

It can be obtained from the

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*Plain or
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The Benjamin Chase Co. Derry Village, N.H.

Ben Davis

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Everything in
Small Fruit Plants.

Ask for price list.
W. N. SCARFF, New Carlisle, O.

THE BADGE BOOK

American Association of Nurserymen
June 8-10, 1910, Denver, Col.

Prompt attention to the matter will secure you
space now. Write Secretary

JOHN HALL

204 Granite Bldg., Rochester, N. Y.

35TH YEAR

Pan Handle Nurseries

WE OFFER A COMPLETE ASSORTMENT OF NURSERY
STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust "
Small Fruits	Syringaeas	Fruit Tree "
Maple Norway	Clematis	Catalpa Speciosa Seed.
Maple Schwedlers	Honey Suckle	Etc., Etc., Etc.
Maple Silver	Wistaria	

Our stock is well grown and graded. Prices are such that it will pay to
investigate. Come and see us or write.

J. K. HENBY & SON
GREENFIELD, IND.

Fumigation with Hydrocyanic Acid Gas Generated From Cyanide ^{98%}/_{99%}

Is the only positive eradicator of San Jose
Scale and other Insect Pests. Endorsed
by all agricultural experiment stations.

Manufactured by

The Roessler & Hasslacher Chemical Co.
100 WILLIAM ST., NEW YORK

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For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, com-
bined with the quality of our product is unsurpassed.

Samples and prices are at the command of a com-
munication from you.

Dayton Fruit Tree Label Co.
South Canal St., Dayton, Ohio

For Fall 1910

We wish to Call Attention to Our Offerings of

PEACH—One Year and June Buds. We invite inquiries NOW from
buyers of June Budded peach, plum and apricot. We will bud especially
to suit YOUR particular wants.

PLUM—De Soto, Wyant and Japanese varieties

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

PRIVET—California and (true) Amoor River.

ROSES—Leading Hybrid Perpetuals, also Hardy Climbers.

MAGNOLIA Grandiflora, SPIREA Van Houttei and ALTHEAS.

Fraser Nursery Company

Incorporated

HUNTSVILLE, ALABAMA

A MATTER OF ADJUSTMENT

The advertising columns of THE NATIONAL NURSERYMAN can be used for bringing about the Profitable Adjust-
ment of the Demand and the Supply. You can increase the Demand. Send us copy every month.

THE NATIONAL NURSERYMAN, - ROCHESTER, N. Y.

LEVAVASSEUR & SONS, Nurseries at Ussy and Orleans, FRANCE

Wholesale Growers of Fruit Tree Stocks, Ornamentals, Evergreen Seedlings, etc. Best Grading Quality, and Packing
Largest shippers to this country. All leading nurserymen are our regular customers. Orders booked now for delivery for season
of 1910. Compare prices quoted in last Trade list. For catalogues and price list address us or our

American Agents, AUGUST RÖLKER & SONS, New York, 31 Barclay Street or P O. Box 752.

When writing to Advertisers please mention The National Nurseryman.

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have full list of varieties for fall trade with special inducements for orders for late fall
delivery in car lots, or cellared for Spring if desired. Our facilities are unsur-
passed for handling these large orders. Try us and be convinced.

Not satisfied with our present large cellars, are now build-
ing one 112 ft. by 240 ft. connecting with and south
of present brick cellar.

OUR SPECIALTIES ARE

ROSES

H. P.

Moss

Ramblers

Climbers, Etc.

PEACHES

PEARS

PLUMS

CHERRIES



CHERRY—EARLY RICHMOND

Ornamental
Trees and
Shrubs in
Car Lots

Weeping Mulberries
Elm and Ash

Clematis

Ampelopsis

Paeonies

Hydrangeas, Bush
and Tree

Holland Bulbs

NO TROUBLE TO PRICE YOUR WANTS

55 Years

1200 Acres

44 Greenhouses

THE STORRS & HARRISON CO.

PAINESVILLE, OHIO

A BLUE ROSE

The Greatest Rose Novelty of the Century

It flowered with us this season and
was greatly admired

The New Rambler (Violet Blue), hailed
by the German rose growers as the fore-
runner of a genuinely cornflower blue rose,
is a seedling of Crimson Rambler, very
vigorous and hardy, and full blooming.

SEND FOR DESCRIPTION AND PRICE

Ellwanger & Barry

MOUNT HOPE NURSERIES
ROCHESTER, N. Y.

The "J & P" Preferred Stock

(You've heard of it!)

Some Specials for a March Sale to
Close Out

TREE HYDRANGEAS	TREE LILACS
CLEMATIS PANICULATA	SNOWBALL HYDRANGEA
LARGE-FLOWERING	WEIGELAS, Eva Rathke, etc.
CLEMATIS	FORSYTHIAS
SPIREAS	CONIFERS
PERENNIALS Fine Collection	GOOSEBERRIES

ROSES---Our Leading Specialty

CRIMSON RAMBLER	DOROTHY PERKINS
BABY RAMBLER	CRIMSON WHITE BABY RAMBLER
HYBRID PERPETUALS	MISCELLANEOUS ROSES
2,000 ROSE TREES	

March Bulletin, with Grade Counts, corrected to date,
now ready. Send for copy. Want Lists invited; attractive
prices quoted on above and other surplus.

Jackson & Perkins Company

Growers of The Preferred Stock
Newark, (Near Rochester), New York

March first.

SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

IN CAR LOAD LOTS

We offer BIOTA AUREA NANA, Cedrus, Deodara, Junipers
and assorted Specimen Conifers.



BIOTA AUREA NANA

Figs, Spanish Chestnuts,
Althaeas, Deutzias,
Exochordas, Lilacs,
Philadelphus, Spiraeas,
Weigelas, and other De-
ciduous Shrubs.

Ashes, Elms, Maples,
Weeping Mulberries,
Tulip and Lombardy Pop-
lars, Lindens and Texas
Umbrellas.

Strong field grown ROSES
Standard sorts, budded
and on own roots.

Citrus Trifoliata, Amoor
and California Privets.

AZALEAS, Camellias,
Magnolia Grandiflora,
and other Broad-leaved
Evergreens in great va-
riety

Send for Catalog

P. J. BERCKMAN'S CO., Inc.,

Fruitland Nurseries
Established 1856

AUGUSTA, GEORGIA
Over 450 Acres in Nurseries

The Farmers Nursery Company

TROY,

OHIO

OFFER

APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes Catalpa Bungeii, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants.

Stock grown at Dansville, N. Y. and Troy, O.

B. E. Fields & Sons

Fremont Nurseries

FREMONT, NEBRASKA

Offer a General Line of Nursery Stock

APPLE, Keiffer and Garber Pear, Peach,
Cherry and NATIVE PLUM

Our Native Plum are exceptionally fine

GRAPES, Small Fruits, Shrubs

And a large line of

Forest Tree Seedlings

A FINE LOT OF SHADE TREES

W. FROMOW & SONS

Windlesham Nurseries, Surrey, England

Offer 250 acres of Hardy Outdoor Nursery Stock in great variety, chief among which may be noted the following:

Hardy Named Rhododendrons in such varieties as Everestianum, Caractacus, H. W. Sargent, C. S. Sargent, Kettle-drum, Chas. Dickens, Lady Armstrong, Atrosanguineum, Chas. Bagley, Alba elegans and grandiflora, Giganteum, Old Port, Fastuosum fl. plena, Roseum elegans, Delicatissima, Ed. S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the Parson's Hybrids.

Andromeda Floribunda, 20,000 to offer in bushy well grown plants 6 in. to 18 in.

Andromeda Japonica 6 to 18 in.

Azalea Mollis, seedlings from named varieties 4 to 24 in.

Ghent Azaleas, on own roots 12 to 24 in.

Azalea Pontica, the common yellow 12 to 30 in.

Gaultheria Shallon and Procumbens.

Kalmia Latifolia 6 to 30 inches.

Hybrid Tea, Tea, Polyantha and Hybrid Perpetual Roses, strong field-grown stock as Standards, Half Standards and Dwarfs in all leading varieties.

Copper Beech, selected seedling, specially good strain 3 to 9 ft.

Fruit Trees, trained, Espalier and Fan shaped.

Box, Handsworth and Common Tree 6 in. to 5 ft.

Retinospora Plumosa and Plumosa Aurea 6 in. to 6 ft.

Retinospora Pisifera and Pisifera Aurea 3 to 6 ft.

Retinospora Obtusa compacta 6 in. to 5 ft.

Abies Orientalis, Parryana, parryana Glauca and Kosteriana 6 in. to 4 ft.

FOR DELIVERY FALL 1910

We are within an hour's rail ride of London, and shall welcome the personal inspection of any Nurseryman visiting England. We shall not importune you to buy, the quality of our stocks will ensure business. Send orders timely to our sole agents for U. S. A. and Canada.

AUGUST ROLKER & SONS,

31 Barclay Street, P. O. Box 752, New York

Franklin Davis Nursery Co.

Baltimore, Maryland

We offer for Spring 1910---

Apple, 1 and 2 year, leading varieties.

Pear, Standard, Keiffer, Blight Proof, Koonce, Garber, Etc., Etc.

Peach, 1 year, standard varieties.

" 2 " June Buds.

Cherry, 1 and 2 year on Mahaleb.

Asparagus, best leading kinds, 1 and 2 year.

Privet, California, 1 and 2 year, fine.

" Ibota, 1 and 2 year.

Strawberry Plants, best varieties.

Grape Vines, 1 and 2 year; heavy on 1 year Concord.

White Birch, 10-12 ft., fine.

Silver Maple, 10-12 ft., 8-10 ft., 7-8 ft.

Sugar Maple, 8-9 ft., 7-8 ft.

Norway Maple, 7-8 ft., 6-7 ft.

Poplars, Lombardy & Carolina, 1, 2 and 3 year.

Catalpa Speciosa, 8-9 ft., fine.

Weeping Willows, 8-9 ft., fine.

Oriental Planes, 8-9 ft., fine.

We have a fine lot of Extra Heavy Shrubs, such as Hydrangea P. G., Weigelas, assorted; Altheas, assorted; Judas Trees, Spireas, assorted; Eulalias, Snowballs, Lilacs, Strawberry Tree.

In large Shade Trees we have Sugar Maples, Elms, Box Elder, Catalpas, Evergreens, Roses, Etc., Etc.

Would accept orders to bud Peach on contract. Can commence shipping October 1st, or earlier.

Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Spring of 1910 in large quantities as usual:

SPECIALTIES

PEARS—Bartlett and Beurre de Anjou, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore

PEARS—Assorted leading varieties. One and two yrs. old.

CHERRIES—On Mahaleb. Leading sour varieties. A large block but not as many as usual.

PEACHES—We excel in Peaches, and of these we will have as large and as fine a stock as we have ever grown, both in one year and June Buds.

PLUMS—A light stock of these for this year.

PECANS—We make a specialty of grafted Pecans. These are grown in our branch nurseries at Biloxi, Miss., where the conditions are very favorable for their propagation.

ROSES—Budded. We have discontinued the propagation of Roses at Biloxi. We will have a large stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Horseshoe Brand Products

There is nothing more beautiful in a garden of a well-kept place than a few **Speciosum Lilies**. For spring planting we offer good bulbs of **LILIUM MAGNIFICUM**, the handsome Japanese red lily, in various sizes and at very reasonable prices. Write us.

Ralph M. Ward
& Co.

12 West Broadway
New York



NOT HOW CHEAP
BUT HOW GOOD

When You Want Raffia

ORDER

RED STAR BRAND
Quality Guaranteed

It's the Nurseryman's favorite. Nearly everyone uses it and recommends it. It will be to your advantage to try it.

Orders now booked for immediate shipment or when wanted. We are direct importers. Write for samples and prices.

Thomas Meehan & Sons, Inc.

DIRECT IMPORTERS OF RAFFIA
DRESHER, MONTG. CO., PA.

B. & A. SPECIALTIES.

BLUE SPRUCE, all sizes, 2 to 7 feet.

WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.

ROSES, Hybrid Perpetual and Hybrid Tea varieties.

CONIFERS and EVERGREENS, 150 varieties.

RHODODENDRONS, Hardy Hybrid and Maxima, 50 varieties.

EVERGREEN SHRUBS, 35 varieties.

FLOWERING SHRUBS, 350 varieties.

JAPANESE MAPLES, 25 varieties.

ORNAMENTAL DECIDUOUS SHADE TREES, 50 varieties.

WEeping and STANDARD DECIDUOUS TREES, 50 varieties.

HEDGE PLANTS, 25 kinds.

HARDY VINES and CLIMBERS, 75 varieties.

PLANTS and TRAILING VINES, 12 varieties.

SPRING and SUMMER FLOWERING ROOTS and BULBS, 250 varieties.

DECORATIVE and FLOWERING PLANTS, 50 varieties.

TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries Pears, Apples, etc.

SMALL FRUITS, 75 varieties.

NEW and RARE TREES, SHRUBS and EVERGREENS, 35 varieties.

MISCELLANEOUS NEW and RARE PLANTS and VINES, 25 varieties.

HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.

NEW and RARE CHOICE HARDY PERENNIALS, 65 varieties.

ORNAMENTAL GRASSES, 30 varieties.

HARDY FERNS, 50 varieties.

ASK FOR WHOLESALE CATALOG

VISIT NURSERIES

BOBBINK & ATKINS,

NURSEYMEN AND FLORISTS,

RUTHERFORD, N. J.

FRANS VAN DER BOM

THE HORTICULTURAL AGENCY, Oudenbosch, Holland.

Before placing your orders ask for our prices.

Andromeda	Dracaena	Manetti
Araucaria	Evergreens	Norway Maple
Areca	Flowering Shrubs	Ornamental trees
Aspidistra	Forest Trees	Paeonies
Azalea (Hardy)	French ornamentals	Planes
Azalea indica	Fruit stocks	Phoenix
Bay trees	Hollies	Rhododendron (Hardy)
Beech, purple	Hortensia	Rhododendron (Parsons)
Buxus	Hydrangea	Roses, dwarf
Chestnuts	Japanese Maple	Roses, tree
Clematis	Kalmia	Roses, new varieties
Climbers	Kentia	Schwedler Maples
Cocos	Koster's Blue Spruce	Spiraea
Convallaria	Latania	Thorns
Conifers	Magnolia	Tilia
		Weeping Trees

Send us a postcard and we will mail you our descriptive catalogue by return mail.

CHERRY OFFER

WE offer the trade, in car lots f. o. b. Huntsville, Ala., 75,000 2-yr. cherry, Alabama grown, made up of the following varieties:

Black Tartarian	Dyehouse
Montmorencies	Napoleon
Early Richmond	Suda
Ger. Ostheimer	Windsor
Governor Wood	Wragg

also extra fine 1-yr. and 2-yr. cherry Louisiana and Dansville grown. Special price on car-lots.

Quotations will be promptly submitted on application. Quick action is suggested.

Stark Bro's Nurseries & Orchards Co.

General Nurserymen

Louisiana, Missouri U. S. A.

HAVE you seen and examined the quality of our waterproof rawhide shipping tags and tree labels? This stock is



especially adapted to hard usage and outside use. "Once used, always used." Send for samples and prices. Our refer-

ences are the largest Nurserymen in the United States.

The Denney Tag Co.

WEST CHESTER, PA.

Catalogue Service

The first chapter in our story of Complete Service is the

NEW STOCK CATALOGUE

It has forty-eight pages of careful, accurate descriptions, interspersed with entirely new illustrations.

IT HAS SELLING POWER

Moreover, its cost is not prohibitive. It's honest work for an honest price.

Write for sample pages and price.

W. F. HUMPHREY, Geneva, N. Y.

North Carolina Peach Pits

The Best Kind

We are situated in the best section of the country for buying the small natural Peach Pits, and are in a position to offer them in car loads or less. We guarantee our stock to be as represented. Have a quantity of 1909 stock to offer.

Write us for prices.

Morrison Produce & Provision Co.

Statesville, N. C.

35TH YEAR

Pan Handle Nurseries

WE OFFER A COMPLETE ASSORTMENT OF NURSERY STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust "
Small Fruits	Syringaeas	Fruit Tree "
Maple Norway	Clematis	Catalpa Speciosa Seed.
Maple Schwedlers	Honey Suckle	Etc., Etc., Etc.
Maple Silver	Wistaria	

Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

J. K. HENBY & SON

GREENFIELD, IND.

Fumigation with Hydrocyanic Acid Gas Generated From Cyanide ^{98%}/_{99%}

Is the only positive eradicator of San Jose Scale and other Insect Pests. Endorsed by all agricultural experiment stations.

Manufactured by

The Roessler & Hasslacher Chemical Co.

100 WILLIAM ST., NEW YORK

WOOD LABELS

For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, combined with the quality of our product is unsurpassed.

Samples and prices are at the command of a communication from you.

Dayton Fruit Tree Label Co.

South Canal St., Dayton, Ohio

For Fall 1910

We wish to Call Attention to Our Offerings of

PEACH—One Year and June Buds. We invite inquiries NOW from buyers of June Budded peach, plum and apricot. We will bud especially to suit YOUR particular wants.

PLUM—De Soto, Wyant and Japanese varieties

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

PRIVET—California and (true) Amoor River.

ROSES—Leading Hybrid Perpetuals, also Hardy Climbers.

MAGNOLIA Grandiflora, SPIREA Van Houttei and ALTHEAS.

Fraser Nursery Company

Incorporated

HUNTSVILLE, ALABAMA

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII.

ROCHESTER, N. Y., JUNE, 1910

No. 11

DENVER AND ITS MAYOR

It is something over twenty-two years since it was our privilege to see Denver for the first time. The striking features at that time were the evidences of rapid growth, in the spacious streets, the sparsely occupied blocks. It was a city in the making. Today it occupies the proud position of a city not exhibiting crude undeveloped possibilities but rather a fine measure of artistic and efficient accomplishment. No city in the United States has given more thought to questions of civic utility and civic beauty than has Denver. Around these questions great contests have waged but though in some cases the outcome seemed uncertain and the course of beauty and righteousness a losing one, yet in the final settlement right has usually prevailed.



HON. ROBERT W. SPEER
Mayor of Denver

Denver has just issued triumphantly from a civic campaign making for greater civic beauty. Such objects are always the most difficult to attain because the appeal is by no means universal. That the sentiment in favor of an up-to-date city, modern in its sanitary and its æsthetic aspects should prevail is a matter of more than passing moment. It reflects the ideals and power of the leaders in civic reform and upon no one man does it shed more credit than upon the chief executive, His Honor, Mayor Speer, who has labored unceasingly for the improvement of the city. The new Denver with its handsome and appropriate civic center will stand as a splendid monument to the farsightedness of the Speer administration.



PANORAMIC VIEW OF THE BUSINESS SECTION OF DENVER, COLORADO

Despite all of the objects of interest in Denver and vicinity to occupy the attention of visitors, their eyes are ever turned toward the mountains. There is a fascination in the great snowy range, with its foreground of purple foothills, which the shifting clouds are constantly changing into pictures that only an artist of rare genius could reproduce on canvas. Small wonder that the tourist is charmed, and not satisfied until the mysterious depths have been explored.

THE PLACE OF MEETING

Views in Parks and Streets

When the question of place of meeting came up for discussion at the Rochester convention in June, 1909, several cities were mentioned but only two were considered seriously.



Arch of Welcome at entrance of Union Station, Denver

These were St. Louis and Denver. The vote of those present at the time of the discussion favored St. Louis and it was temporarily decided to go to Missouri in 1910. A little later, however, the feeling became apparent that the west-



Denver Auditorium



Electric Fountain, City Park, Denver

ern city should be favored instead so that it was decided to recommit the question to the members of the association and secure an expression or vote by correspondence. At



In one of the City Parks, Denver

this juncture the western members "got busy" and aided by the generous attitude of the men of the middle west a vote in favor of Denver was obtained.



McClelland Gate, City Park, Denver

It is unnecessary to mention the course of subsequent events further than to congratulate the association on the vigorous way in which the local and general committees have contributed time and energy

to the arrangement of the many details incident to the management of a convention of this magnitude. These gentlemen have worked hard and deserve our hearty thanks.

DENVER A TREE PLANTING CITY

Distribution of Shade Trees

A free distribution of shade trees by the city administration has become an annual custom in Denver. Nearly twenty thousand young trees were given to the people this spring and they are all planted, says a correspondent writing from Denver.

The custom has been in vogue here for five years and each year it is becoming more popular and the demand for trees is increasing. This season the requests for trees exceeded the supply by several thousand, but as the limit of the sum available for the purchase of trees is made by the city council, the appropriation could not be exceeded. The sum appropriated was \$5,000 and the average price paid per tree was 29 cents.

When the city of Denver was laid out fifty-one years ago there was not a tree on the site. The early settlers began planting cottonwood trees, believing this was the only kind that would thrive in Colorado soil. In after years experiments were made with other species. Today the streets in the older sections of the city are lined with tall, wide-spreading shade trees and the stranger is astonished when informed that this prolific growth of shade trees has taken place within a generation.

Denver covers sixty square miles of territory and most of the young trees are being set out in the newer sections. Maple, elm and poplar are the kinds that are distributed by the city. The elm, however, seems to be in greater demand as this species apparently thrives the best in this climate. The maple grows faster and is the better shade producer, but it is not so hardy as the elm.



Delivering Free Trees in Denver, Colorado, on Tree Day

The method of distribution is upon orders signed by the mayor or a member of the council. The limit is three trees to one person. Ten days previous to the date set for giving out the trees, the public is informed through the daily newspapers of the rules governing the distribution. Tree stations are established in various parts of the city. The young trees are set in the ground nursery fashion, and to avoid a crush, fences are erected. One entrance to the enclosure and two exits are provided and applicants are required to pass along in single file. As each order is presented, three nursery trees are handed out, the applicant being permitted to choose from the kinds on hand. The line is kept moving rapidly and the trees are all distributed in one day.

The Forestry department of the city has kept careful check on the growth of the trees planted since the first "Tree Day" was established. Knowledge on the subject of tree planting is disseminated among the people. Men from this department tour the city while the young trees are being planted and give advice and instructions when needed. Last year 82 per cent of the trees planted lived and are thriving. It is expected that the percentage will be increased this year as the people are becoming educated in tree planting and culture.

Letters of inquiry in large numbers from other cities are coming into the office of the mayor asking for details of the plan. The system is a success in every way and in a few years every section of the city will be amply supplied with shade trees.

Nursery, Mo., May 17, 1910

Ed. National Nurseryman:

I am enclosing, herewith, copy of the program prepared by our Entertainment Committee. All arrangements for the Entertainment have been made, and the Western Nurserymen are looking forward to a good representation at the Convention.

Be sure to announce in your next publication under Railroad Arrangements that "Parties going to the Con-

vention" should purchase tickets to Colorado Springs, as the fare is the same and if they desire to take in this trip it will not cost them any more and they do not have to go to Colorado Springs to validate the tickets. This can be done in Denver.

I will be on hand early Monday morning, June 6th, to meet you at Union Station.

Yours truly,

F. A. WEBER, Chairman of Ent. Committee.

OFFICERS OF THE AMERICAN ASSOCIATION OF NURSERYMEN



F. H. STANNARD, OTTAWA, KANSAS
President American Association of Nurserymen

Mr. Stannard succeeded Mr. C. J. Brown as president of the Association at the Rochester meeting and will preside during the session at Denver. He is president of the F. H. Stannard Company, Ottawa, Kansas. Mr. Stannard, who moved west a number of years ago, rapidly identified himself with the interests of the city of Ottawa where he established a large nursery enterprise. He represents his district in the state legislature, and has been a valued adviser in the forward movement in connection with civic affairs.

Mr. Dayton is well known in nursery circles both by reason of his close association and important work in connection with the national society, and by reason of his position as secretary of the Storrs-Harrison Co., of Painesville, O. Mr. Dayton has occupied various positions of trust in the American Association of Nurserymen in connection with transportation, with legislation and tariff matters, all of which he has discharged with advantage to the Association and credit to himself.



J. H. DAYTON, PAINESVILLE, OHIO
Chairman Executive Committee

Mr. C. L. Yates has served the Association as treasurer for 12 years. He has been a constant attendant at its meetings and has rendered excellent service in promoting comfortable transportation to places of meetings besides disseminating that quality of good fellowship which is characteristic of the popular personality, familiarly known as "Charley." Besides his nursery and publishing interests Mr. Yates is catering to public tastes in gum and chocolate.

Mr. John Hall is an Englishman by birth, and in common with many Englishmen possesses a keen love and interest in plant life. His affection for gardens and plants is inborn and native. As secretary of the Western New York Horticultural Society for many years past Mr. Hall has made a reputation for editorial ability and resource in publicity matters which augurs well for his success as secretary of the national society of nurserymen. He certainly comes well recommended and will undoubtedly make good.

RAILROAD INFORMATION FOR EASTERNERS GOING TO DENVER

THOSE GOING TO COLORADO ONLY, should buy round trip tickets to Pueblo routed as follows: L. S. & M. S. to Cleveland, Big Four to St. Louis, C. B. & Q. to Denver, Colo. Southern to Pueblo. Returning via any direct line through Omaha and Chicago. (The Burlington has the shortest line and the finest trains to Chicago, or they can return to St. Louis via any direct line.

THOSE BUYING YELLOWSTONE PARK TICKETS should read going trip from St. Louis to Denver and Billings via C. B. & Q. (free side trip ticket given at Denver to Pueblo and return). They

can return from the North Gate (Official Entrance) to St. Paul and down the Mississippi River Lines to Chicago.

THOSE BUYING THE FRISCO TICKETS can use the same route to Denver, thence D. & R. G. through the Rocky Mountains, Salt Lake City, return via Portland, Seattle and St. Paul.

THE SPECIAL SLEEPER FROM ROCHESTER, in going to Denver will travel via N. Y. C. to Buffalo, L. S. & M. S. to Chicago, Big Four to St. Louis, C. B. & Q. to Denver. Be sure that your ticket reads in that way.

DEVELOPING HOME RESOURCES

A member of the Rochester Chamber of Commerce, Mr. C. F. Garfield, has been doing excellent work in stimulating interest in the development of home industries in the smaller towns west of Rochester. At a recent address at Holley, he was instrumental in securing a subscription list approximating \$1400, for the purpose of organizing a publicity and exploiting board to develop home manufactures, and stimulate movement in real estate in that section. The movement has been organized by appointing a paid secretary whose business it will be to develop plans looking towards the establishment of new industries, and promoting a propagandist movement in orcharding in and about Holley.

LOCATION FOR WALNUTS

Walnut industry on the Pacific Coast, particularly in Oregon and California, is advancing quite steadily. In a recent article in the *California Fruit Grower*, W. T. Clarke advocates the selection of well drained land with a soil containing a considerable degree of native moisture. Of course irrigation is necessary in California.

Next to the type of soil the character of the location is important. Air drainage is an exceedingly necessary factor in securing regular crops on the Pacific Coast. Losses due to exposure and sudden fluctuations of temperature are frequent, and moderately elevated, well aerated sites are requisite.

The writer recommends the native California black walnut as a stock on which to propagate the cultivated varieties.

CHAIRMEN OF IMPORTANT COMMITTEES WHO WILL REPORT AT THE DENVER MEETING



W. P. STARK, LOUISIANA, MO.
Chairman Committee on Transportation

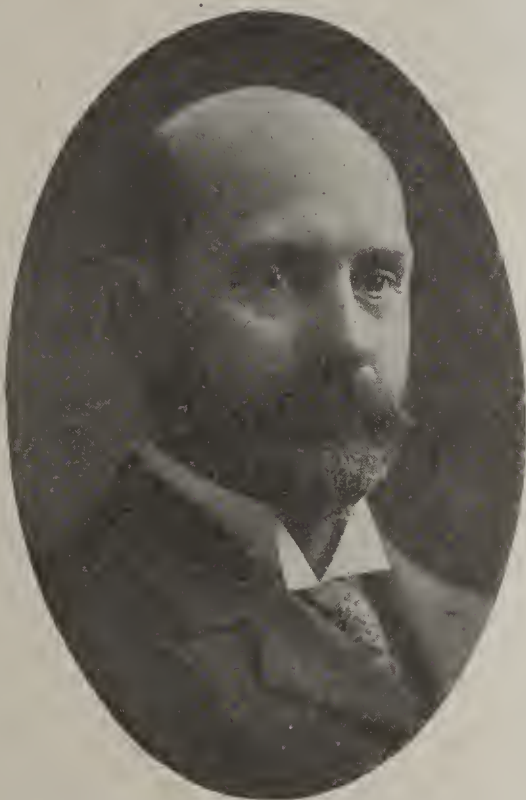
Treasurer of the Stark Brothers Nurseries and Orchards Co., Louisiana, Mo. Chairman Missouri Board of Horticulture. Life member of the American Pomological Society. Vice-president American Association of Nurserymen.

The nursery company which Mr. Stark directs is one of the largest in the country. Branches are maintained in Arkansas, Oregon and New York. The extent of their oper-

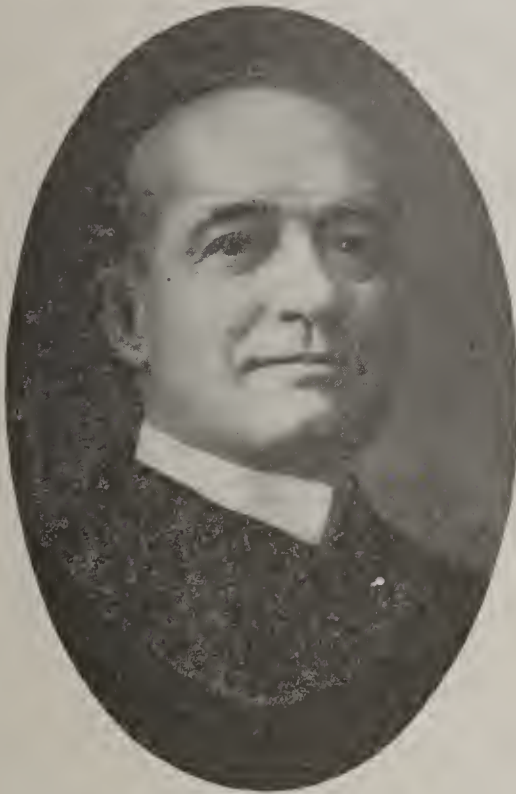
ations in fruit tree propagation is indicated by the fact that more than two million grafts of a single variety were made last year.

Mr. Rouse is well known as a wholesale nurseryman and one who has been prominent as a grower of orchard fruits. He has been closely identified with the Western New York Horticultural Society for many years as member of the executive committee. He has taken an active part in civic affairs in the city of Rochester, and has been a vigorous and consistent worker in behalf of the nursery interests of this country, while occupying various important

positions of trust in the national society. Few members of the American Association realize the amount of time and thought which Messrs. Rouse and Pitkin have devoted to tariff and legislative matters—work neither remunerative nor agreeable.



IRVING ROUSE, ROCHESTER, N. Y.
Chairman Committee on Tariff



CHARLES J. BROWN, ROCHESTER, N. Y.
Chairman Committee on Legislation

Mr. Brown is well known as the president of Brown Brothers Company of Rochester, of which Brown Brothers of Ontario, Canada, is a branch. Mr. Brown filled the office of president of the Association last year, and the successful meeting held in Rochester marked very distinctively the close of his year of office. Mr. Brown is a valued member of the Rochester Chamber of Commerce, and is conscientious in the discharge of his civic duties. The grounds

of the home nurseries in Rochester are rapidly becoming one of the most attractive places in the city and its environs.

Mr. Hill is head of the Des Moines Nursery Company of Iowa, and is well and favorably known in the affairs of the American Association of Nurserymen. He was president of the organization during 1908 and presided at the Detroit meeting with his usual ability and distinction. Mr. Hill found time in addition to carrying on his extensive nursery enterprise to take part in the late campaign for a new type of government in Des Moines, which culminated two

or three years ago in the organization of city government by commission. He is valued as a worker and public speaker. In the preparation of the program Mr. Hill has worked hard to find men who could present subjects of live present day interest.



J. W. HILL, DES MOINES, IOWA
Chairman Program Committee



E. P. BERNARDIN, PARSONS, KANS.
Chairman Exhibits Committee

most influential of the subsidiary organizations of nurserymen in this country.

Mr. Hobbs was the founder of the firm of Albertson & Hobbs of Bridgeport, Ind., which was succeeded three years ago by the firm of C. M. Hobbs & Son, of which he is senior member. He is a veteran in nursery work, and has occupied the position of vice-president of the American Association of Nurserymen. His mature judgment may be relied upon in Association matters, and he is one of the constant attendants at its meetings. In state horticultural affairs Mr. Hobbs has taken a leading part, having acted for a number of years as president of his state society, and having been an active member of the Board of Horticulture of Indiana for a number of years.

Mr. Bernardin is a wholesale nurseryman of Parsons, Kansas. He has occupied various positions of responsibility in the national society during recent years and has always discharged such trust as was laid upon him with skill and efficiency. He occupies at present the position of president of the Western Association of Nurserymen, one of the

ing as a member of the committee which drafted the now famous constitution under which the commission form of government of the city of Des Moines is working.

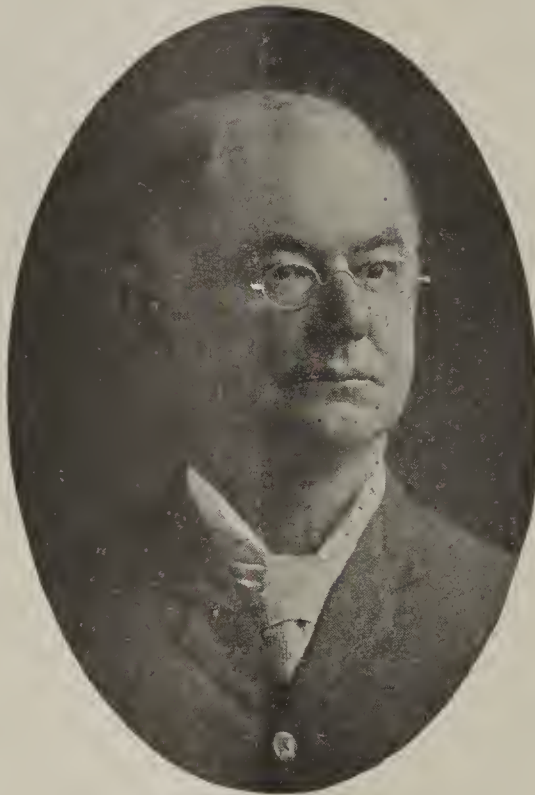
The genial Frank is well known to the majority of nurserymen as the senior member of the Weber Nursery Company of Nursery, Mo., and also as a former president of the



FRANK A. WEBER, NURSERY MO.,
Chairman Committee on Entertainment

American Association of Nurserymen. Mr. Weber's efforts on behalf of the Association in connection with former meetings, and the present gathering at Denver, have always been energetic and greatly appreciated.

Mr. Sherman is president of the Sherman Nursery Company of Charles City, Iowa. While neither among the youngest nor the oldest of the members of the Association he has been a regular attendant at its meetings and a frequent contributor to the program. As an essayist and speaker, Mr. Sherman is greatly appreciated.



C. M. HOBBS, BRIDGEPORT, IND.
Chairman Committee on Forestry

Mr. Chase is one of the younger members of the society, representing an active, aggressive nursery firm of Alabama, prominent as growers of nursery stock in wholesale quantities.

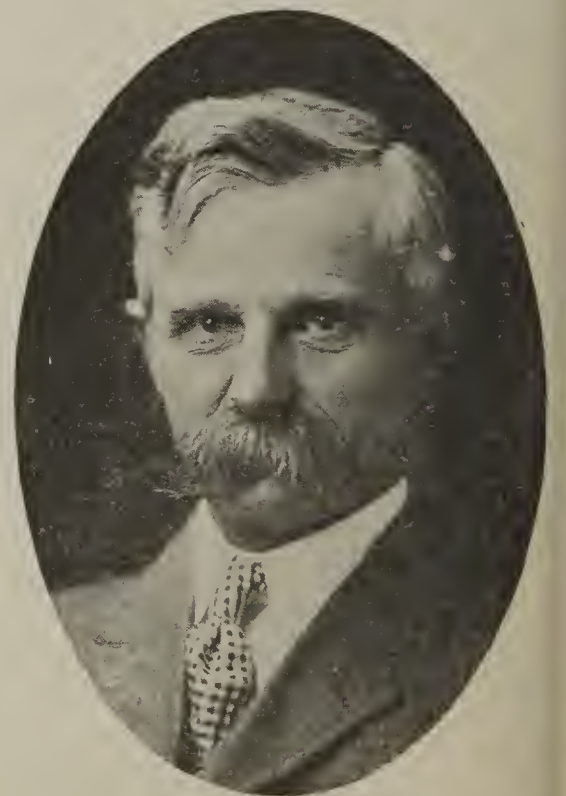
Mr. Harrison is a member of the firm of J. G. Harrison & Sons, Berlin, Md., who rank among the largest growers of nursery stock in this country. Mr. Harrison has been an active member of the Association for many years, working on various committees and acting as efficient president of the Asso-

Captain Watrous is president of the Capital City Nurseries, and has been identified with the fruit interests of the Hawk Eye State for more than forty years. He has been president of the American Pomological Society, of his state horticultural society, the American Association of Nurserymen, and has been a reliable worker upon the committees of the American Association of Nurserymen.

Mr. Watrous also had the distinction of act-



CAPT. C. L. WATROUS, DES MOINES, IOWA
National Council of Horticulture



E. M. SHERMAN, CHARLES CITY, IA.,
Member Executive Committee, American Association of Nurserymen



H. B. CHASE, HUNTSVILLE, ALA.,
Member Executive Committee American Association of Nurserymen

ciation for one term. His efforts in coordinating the interests of nurserymen, nursery inspectors and entomologists are greatly appreciated. Mr. Harrison studied nursery conditions in Europe a year ago.



E. P. Bernardin and His Nursery



ORLANDO HARRISON, BERLIN, MD.,
Chairman Committee on Coöperation with Entomologists

LITERARY PROGRAM

As Arranged by Chairman Hill, for Denver Meeting, June, 8, 9, 10, 1910

Address of Welcome, Col. J. S. Irby, representing City of Denver.
Response, Capt. C. L. Watrous of Des Moines, Iowa.
President's Address, F. H. Stannard, Ottawa, Kans.
Report of Secretary, John Hall, Rochester, N. Y.
Report, Treasurer C. L. Yates, Rochester, N. Y.
Report Tarriff Committee, Irving Rouse, Rochester, N. Y.
Report Transportation Committee, W. P. Stark, Louisiana, Mo.
Report Legislative Committee, Chas. J. Brown, Rochester, N. Y.
Report Entertainment Committee, F. A. Weber, Nursery, Mo.
Report Publicity Committee, Thos. B. Meehan, Dresher, Pa.
Report Committee on Exhibits, E. P. Bernardin, Parsons, Kans.
Report Forestry Committee, C. M. Hodges, Bridgeport, Ind.
Report National Council Horticulture, Capt. C. L. Watrous, Des Moines, Ia.
"Publicity Campaigns on part of Nurserymen," J. M. Irvine, St. Joseph, Mo.
"Varieties," E. S. Osborne, of Rochester, N. Y.
"Orchard Pests still unknown to the Colorado Fruit Grower," Prof. G. P. Gillette of Ft. Collins, Colo.
"Co-operation between Nurserymen and Fruit Growers," W. L. Howard, Sec. Missouri State Board of Horticulture.
"Practical Experiments with Root Gall on Apple Trees," Vice-President E. A. Smith, of Lake City, Minn.
"Transplanted Raspberries for the Retail Trade," W. N. Scarff of New Carlisle, Ohio.

"Should a Young Man Choose the Nursery Business for a Vocation?" A. Willis of Ottawa, Kans.

"Observations upon European Nursery Stock and Their Plant Growing Methods," (illustrated by lantern slides), Prof. Craig of Ithaca, N. Y.

"The Part Nurserymen have taken in the Growth and Development of the Nation," J. B. Morey, Dansville, N. Y.

"Herbaceous Plants," C. S. Harrison, of York, Nebr.

"Magnifying our Craft," E. W. Kirkpatrick of McKinney, Tex.

"A Study of the Nursery Land of the United States," W. H. Stark, Louisiana, Mo.

"The Commercial Side of the Nursery Business," H. W. Marshall of Arlington, Nebr.

"Effects of Tree Planting in the Middle West," Geo. H. Whiting, Yankton, S. Dak.

"Resultant Evils of Replacement Policy," J. W. Mayhew, Waxahachie, Texas.

"Crown Gall and its Effect on Orchard Trees," Peter Youngers, of Geneva, Nebr.

"Is the Organization known as the American Association of Nurserymen a Benefit to the Nursery Business?" E. M. Sherman, of Charles City, Iowa.

"Nurseryman's Peach Seed Supply," C. C. Mayhew, Sherman, Texas.

"Soils and Fertilizers," F. L. Rounsvel, Denver, Col.

ENTERTAINMENT PROGRAM

JUNE 7TH—Receiving delegates by Local Committee.

JUNE 8TH—2 P. M., Ladies will be given "Sight Seeing" trip through City of Denver, in automobiles, as guests of the Denver Convention League, in connection with the Western Nurserymen.

JUNE 9TH—2 P. M., Ladies will be given Matinee party at the Broadway Theatre, as guests of the Denver Convention League, in connection with the Western Nurserymen.

JUNE 10TH—9 A. M., Trip over the Moffat Route to Corona, and intermediate points of interest, by "Special Train". Luncheon and Refreshments will be served on train by leading Denver Caterer, returning to Denver about 7 P. M., as guests of the "Western Nurserymen".

The Committee is planning other features, which will be announced on the first day of meeting.

PERSONALITIES OF FRUITS, II

JOHN CRAIG

In the Garden Magazine

LIVLAND RASPBERRY

Here we meet an out and out foreigner. It came to this country in 1870 with a large batch of immigrants entrusted to the care of the U. S. Department of Agriculture by the Director of the Imperial Botanical Gardens of St. Petersburg. The consignment proved to be a motley one indeed, and among many scores of blanks Livland Raspberry proved to be a prize. Though it came to this country from Russia it bears the German name Himbeerapfel Livlander, and the probability is that Silesia or Poland was its place of birth. In common with the great majority of reputed Russian apples as grown in this country it matures early, in fact among the very first of the summer crop.

The tree is a round topped, vigorous grower, quite hardy as far north as the Valley of the St. Lawrence in Quebec, and is grown successfully in Northern Ontario.

The fruit is very handsome, one of the handsomest summer apples and growers, and for an extremely early apple really worth while. I believe it will replace Red June and Early Harvest when better known, especially in sections where summer apple culture is a profitable industry. The apple is of medium size, of regular, roundish form, with smooth, tough skin, beautifully covered with bright red shading into crimson, thickly veiled with lilac colored bloom. Its flesh is sparkling white, often tinged with red near the skin, very tender, melting, with a pleasant, mild, sub-acid flavor. Livland Raspberry, coming almost as early as that earliest of apples, Yellow Transparent, and very much better for eating, though not quite as good for cooking, is well worthy of cultivation in the home garden, and is an apple also to be carefully tested for commercial purposes on a large scale. Like most early summer apples the flesh being tender, it is not adapted for handling in large packages. It is eminently a small package variety, and when placed upon the markets in this way it will make a very attractive showing.

CHENANGO

This is more often called Chenango Strawberry. Its name naturally associates it with Chenango county, New York, but Madison county offers strong evidence of being its birth place. It is a relatively new variety as varieties go, having been in cultivation but little more than half a century. The personal characteristics of Chenango are exceedingly interesting.

The tree is characterized by short, stout, sturdy branches and by a vigorous, upright type of growth. The tree is not one of the largest, yet it attains a very fair size.

The fruit is peculiar in form in that it suggests the old Sheep-Nose variety, but is not so pronounced in its oblong conicality as that old dooryard favorite. In addition to its conical and oblong form it is often marked with pronounced

ridges. The color is a clear yellow ground, overlaid with lively red in long stripes and occasional large blotches. The skin is peculiarly smooth, not oily but suggesting rather a highly polished surface. The flesh is white, tender, yet crisp and juicy, and one of its distinguishing characteristics is the notable aroma and aromatic qualities which become very pronounced in eating a specimen.

Chenango like Jefferis ripens its crop successively, continuing through September in Central New York. Here is an apple that would be much more highly appreciated, like some others of its season, if it did not happen to compete with the Crawford group of peaches. Chenango is a little too mild in flavor to make the best quality of apple sauce. It is essentially a table dessert apple.

Finally, let us say that we should plant Chenango on strong, sandy loam, prune to an open head, in order to permit the admission of sunlight, feed the tree liberally, and if planted on the heavier grades of sandy loam, handsome fruit should be the annual reward.

FAMEUSE

In New York and Michigan one hears of the Snow Apple. In the Lake Champlain district the Fameuse is spoken of and in the province of Quebec you hear the habitant speak of LaFameuse, LaBelle Fameuse, and occasionally Pomme de Neige. This is by all odds the most widely known of all Canadian apples. Its range of proper adaptation, however, is much narrower than its reputation. Its intrinsic excellence has been the means of extending its culture outside of its natural habitat.

There are several important points to be kept in mind in connection with the culture of this splendid apple. First, it is a northern variety. The Upper St. Lawrence, the Lake Champlain district, and the North Lake region of Michigan furnish congenial conditions. When grown in regions too cool for ripening Dent corn Fameuse attains that quality of crispness essential to the development of its highest flavors. In Dent corn regions its keeping season is short and the flavor wanting in briskness. Second, in no section is it a first class cooking variety. If used for this purpose it should be taken at a somewhat immature stage.

LaBelle Fameuse, as the French Canadians are proud of calling it, may be found practically in every region in the St. Lawrence Valley from Kingston to points far below the Sauguenay River, practically as far East as apple growing prevails.

A brilliant crimson, the characteristic of the color of this apple, is sometimes laid on in stripes and sometimes in heavily suffused masses. So clearly differentiated are these colors on different trees that people are occasionally of the opinion that they represent different varieties. In Central

and Western New York we regard Fameuse as a fall apple, but in the district of Montreal it is often marketed in March and April from common storage.

The tree does not attain large size. At first it is round topped and compact, but later in life it assumes a somewhat spreading habit, rather dense withal. To offset this density it should be pruned annually, thinning the branches so that the sunlight may be made available to all parts of the tree. Like many good things, fine clean fruit of this variety is not easily obtained for it is subject to apple scab in its most virulent form. Since the advent of spraying the disease is less feared, though in older Fameuse growing districts there is always a considerable percentage of loss from this enemy. In soil requirements the variety is not so particular as some apples, but, nevertheless, it has a decided preference for a porous gravel containing a high percentage of lime. This type of soil brings to perfection its natural and beautiful colors, and when coupled with a northern latitude its delicious crisp yet melting qualities of flesh.

As commonly grown in the regions of the eastern townships of Quebec and the Upper St. Lawrence Valley there is but a small percentage of No. 1 fruit. The heavy bearing proclivities of the tree, the susceptibility of foliage and fruit to scab, faulty pruning, all tend to reduce the grade of fancy fruit, and increase the amount of small and poorly colored specimens. The visitor to the markets of St. Hyacinthe, Sorel, or Trois Rivières during the winter months will be astonished at the marvellous assortment in the way of qualities of LaBelle Fameuse laid out before him. He can buy samples from the size of marbles covered with scab fungus up to the normal and beautiful 2½" specimen, and this possibly from November until April.

For a number of years an apple grower of the Montreal district, Mr. R. W. Shepard, has shipped a limited quantity of fancy Fameuse to a personal market in England. The package used is a box holding about one hundred specimens, constructed on the egg case plan, each apple being wrapped and having a compartment to itself. This suits the soft textured Fameuse admirably. While Fameuse is appreciated and has been sold in barrels in the Boston market for many years, and while the bulk of the Champlain grown stock finds sale in this way, yet it is a fact that in this variety we have primarily a box or small package apple and one always to be handled as a fancy variety.

This worthy apple has been grown for nearly three hundred years in the Province of Quebec and as a natural result of wide-spread cultivation of any variety, is now the parent of a goodly progeny. The most distinguished member of the family is the McIntosh. Other scions of this noted family of pomes are, Shiawassee of Michigan origin, Princess Louise and Scarlet Pippin of Ontario region. Besides these there are several of local repute in the vicinity of Montreal. Growers in that region are well acquainted with Fameuse Sucre, Fameuse Noir and Green Fameuse. These varieties, though not competing with the parent are appreciated by local growers.

MCINTOSH

Were I the originator of this apple I would have reason to be a proud man. I would have full justification for realiz-

ing that pleasurable sensation attendant upon the performance of a really worthy deed. Railroad kings and captains of industry may come and go. They are soon forgotten, their deeds pass away, but Allen McIntosh, the discoverer and introducer of the apple of his name and of unsurpassed excellence, will as the generations come and go be rightly regarded as one of the people's benefactors.

While there is no circumstantial evidence to prove that McIntosh is derived from Fameuse stock its likeness to that variety, and its general characteristics are so unmistakable as to remove all reasonable doubt from the question.

In "The Apples of New York," that notable publication of the New York State Experiment Station, McIntosh is deemed worthy of a colored plate, but the lithograph is not a happy production. Neither color or typical form are faithfully rendered. When this variety is grown on clay soil it is often slightly ribbed towards the cavity as shown in this illustration, but the normal McIntosh is not ribbed. It is of medium size, averaging somewhat larger than Fameuse, regularly and unusually roundish in outline. The skin is thin and tough. The color of northern grown specimens shades from a livid or bright red to deep purplish red, almost black, overspread with a delicate lilac bloom. Who sinks his teeth into a well grown McIntosh in prime condition, if possessed of a reasonably discriminating taste, cannot fail to carry away a cherished remembrance. I have tried many people and rarely failed in securing an enthusiastic response. Its white flesh, flaky and melting, pleasantly sub-acid, and highly aromatic, represents a gift of the Gods, indeed.

McIntosh originated along the Upper St. Lawrence and its distribution was commenced by the introducer, Mr. McIntosh, on whose farm it appeared as a chance seedling in 1870. It has made its way into public favor very rapidly. The tree is hardy and vigorous, a moderately early and practically annual bearer. It succeeds over a wider range of territory than its reputed parent Fameuse. One finds it growing from the Sauguenay River in Eastern Quebec to the Valley of the Fraser, and even on Vancouver Island in British Columbia on the West. At the national apple show in Spokane in 1908, a carload of this variety was exhibited by a Bitter Root Valley Orchard Co. of Montana, grown at an elevation of some 3000 feet and in a location where the thermometer occasionally touches 40 degrees below zero. In the colder regions of interior British Columbia I found an orchard (an old one for that region) some twenty years of age, where most varieties had been killed by cold and climatic difficulties, yet McIntosh was thriving and productive. In high latitudes it is smaller in size and firmer in texture, coupled with high coloring, than normal. McIntosh like Fameuse is a fancy apple, to be sold in small packages, to be eaten fresh out of hand. Don't cook it. In doing so you simply spoil a good thing. I do not think McIntosh will supersede Fameuse in the old home of the latter but it will have much greater vogue in the newer apple regions of British Columbia and the Northwest Pacific.

John S. Kerr, Sherman, Texas: The April frosts did little damage to fruits south of the Ozark Mountains in Arkansas, yet corn and cotton crops suffered in many sections. Nursery stock in fine condition.

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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ROCHESTER, N. Y., JUNE, 1910.

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Arrangements—John Hall, Rochester, N. Y.
Editing Report—John Hall, Rochester, N. Y.
Entertainment—Frank A. Weber, Nursery, Mo.
Forestry—C. M. Hobbs, Bridgeport, Ind.
National Council of Horticulture—C. L. Watrous, Des Moines, Iowa.

STATE AND DISTRICT ASSOCIATIONS.

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American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.
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Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

TROUBLES OF ENGLISH NURSERYMEN

One is reminded of difficulties of the English nurseryman of a kind quite unknown in this country, by a notice in the *Horticultural Advertiser*, one of the trade journals of England. This notice calls attention to the fact that nurserymen are obliged to take out licenses to do business. It further states that four agricultural firms were unable to secure renewal of license last year, and that this failure was due to the action of the councilmen. The appeal calls for strong opposition to the reelection of chemists as councilmen. The chemists are said to "dabble in the business of almost every trader and to be general busy-bodies." It is probable that the fact that many druggists handle seeds is a reason why this class of business men should wish to restrict the number of horticultural firms. The situation is certainly a curious one, and decidedly unsatisfactory to the plantmen.

YELLOW TRANSPARENT APPLE

This Russian apple is a standard of earliness. The fruit matures with or before the old and well known Early Harvest. Like Early Harvest, and as suggested by its name, it is devoid of high colors, when well grown being a strikingly waxy, light yellow fruit. It is of medium size, regular, roundish conical form, and uniform in size and shape.

The tree is a vigorous, upright grower, remarkably precocious as a bearer, very hardy in common with all the Russian varieties, but like these, is subject to blight which is its worst enemy in the North where its hardiness makes it popular as a summer variety. The fruit is essentially a near-market and amateur variety. Like all yellow skinned apples the slightest bruise is apparent, and the thinness of its skin makes the most careful handling imperative. It should therefore be marketed as a fancy variety, in small packages. Handled in this way, and used as a filler for large growing, longer-lived varieties, Yellow Transparent is likely to be profitable where good summer market facilities obtain. The tree is not long lived, and on account of its early bearing habits is remarkably adapted for the purposes for which a filler is required.

PUBLISHERS AND THE POST OFFICE DEPARTMENT

Publishers of periodicals and publishing houses in general are probably not all aware of the important modification of the postal laws of the country which is pending in Congress at the present time. A contemporary points out that "the bill, though excellent in many respects and much needed, contains germs of the gravest peril to the liberty of the press." The bill greatly enlarges the arbitrary power of the postmaster general. It establishes the spy system in more effective form than in the past, and permits inspectors to examine publishers' offices, giving them authority to search for and remove books, papers and documents, without recourse. A trial by jury is denied to publishers, and the Post Office department is to have absolute power to determine "which publishers may and which may not have access to the mails."

All publishers interested in preserving their rights should communicate with their congressman in regard to H. R. 21321, and with the chairman of the Committee on Postal Regulations, the Hon. John W. Weeks. The bill strikes a blow at the liberty of the press. In this country such a principle is regarded sacred. If it is to be preserved, publishers must bestir themselves.

COLORADO AS AN APPLE PRODUCING STATE Easterners have heard so much in recent years of the output of the orchards of Oregon and Washington that many are prone to believe that the great mass of western apples comes from the extreme western states. According to figures recently presented in the *Intermountain Fruit Journal* it would appear that in 1909 Colorado produced as many apples as all the other Rocky Mountain and Pacific Slope states combined. In other words, Colorado shipped 8000 cars, while California shipped 3000; Washington, 1700; Oregon, 750; and Idaho, Montana and Utah, together shipped about 800 cars.

Of the principal fruit growing counties in Colorado the county of Mesa led last year with an output of 2950 cars, followed by Delta with 2000, and Fremont with 1000 cars. These figures give the fruit production of Colorado an important bearing in relation to the total output of the Rocky Mountain and Pacific Slope states.

The members of the American Association of Nurserymen will have an opportunity while in Denver to visit some of the great orchard projects tributary to the Convention City and will undoubtedly take advantage of such opportunity. It will be somewhat of a surprise for eastern fruit growers to see orchard lands which are valued, indeed, which have been sold at \$3,000.00 per acre, and these under such relatively temporary crops as the peach.

THE EAST AND THE WEST Paragraphs appear frequently in the western papers indicating that the East is jealous of the fruit growing ability of the West. Possibly there are men with minds so small that such a feeling is

harbored, but certain it is that the sentiment is not general. The fruit growers of the country as a rule are ready to appreciate the enterprise, the advertising and the business ability of the western orchardist. More important still, the men of the East are beginning to wake up to the importance of recognizing that success in fruit growing is not dependent exclusively upon ability to grow the fruit, but to a large extent upon the capacity to pack, advertise and sell it. The western men have developed the publicity bureaus in a most remarkable way. They have a right to do this because they grow good fruit, and more than all, pack that fruit in the most approved fashion, so that when they are selling the product they are presenting to the buyer an absolutely honest article.

The western man figures that his orchard should bring him 10% on a \$5,000.00 valuation per acre. Possibly it will do this in gross returns. Probably it will not do this, as

is claimed by some, in net returns, but either figure is good. The same possibilities are open to the grower in the best regions of the East, if he exercises equally good judgment, industry and intelligence. There is no doubt, however, that it will take the Easterner some time to get rid of bad habits, particularly in relation to packing, which have gradually grown up under the influence of tradition and custom, in the course of many years, in connection with early amateurish methods.

GRADING APPLES

The American apple is now finding its way into the markets of the world. Its size, appearance and quality are the factors which introduce it successfully, and which tend to fix attention upon it and hold the interest of the purchaser. These native good qualities of the American apple, however, are heavily handicapped by the action and habits of the packers. Hardly a market report can be found which does not bear some unfavorable criticism upon the methods of the American people packer.

Consul Henry B. Miller of Belfast in reporting upon the consumption of American apples in that city, makes the following comments on the present market situation:

"Two things stand in the way of success in marketing the American apples in Belfast. First, the lack of reliable grading, and second, the failure to have a local or traveling representative of American apples." "Dealers claim that American apples are not well graded and that it is impossible to rely on the American standards of grades."

The Consul goes on to state that twice as many Canadian apples are sold in Belfast market as American apples and that this larger sale is due to the greater confidence which the purchaser has in the uniformity of Canadian grading. This confidence arises out of the fact that the Canadian apples are inspected by a government official and in cases where the grade does not approximate the proper standard the package is stamped 'falsely packed.' The Consul concludes his report by saying that a traveling representative and a thoroughly reliable brand of apples would overcome this difficulty and enable the American grower to place his fruit most advantageously and directly in the hands of the Belfast dealer.

ORCHARD HEATING IN COLORADO

The experience of last year in warding off frost by the use of heating devices in the orchard was so encouraging that the practice came into extensive use in the Grand Valley of Colorado and in some of the other orchard sections of the state this year. A writer in the *Intermountain Journal* describes the scene in the Grand Valley during the cold wave of April in the following terms:

"The lower Grand Valley as viewed from the hills each night during the cold snap was truly a most spectacular sight. The brilliant flames of the homely smudge pots appeared as thousands of miniature volcanoes belching forth fire and smoke as realistic as any that ever issued from the mouths of Vesuvius or Pelee, while the moving torches

of the lighters were like so many giant fire flies flashing in and out among the trees. A great canopy of smoke hung over the orchards, pierced here and there by various air currents giving an occasional glimpse of the clear sky and the sparkling stars overhead. The sun, rising in the east from behind the majestic mountains of the Continental Divide, suddenly appeared a great globe of red gold in the sky and proved a welcome sight to the tired frost fighters whose work was at an end for that night. It's no child's play, this frost fighting business. It's a grand battle from start to finish, but the reward for the grower after the fight has been won is ample and satisfying, for the use of the orchard heater simply means the difference between a good crop and no crop at all.

The frost this year during the danger period was much more severe than last season, but on the other hand, the growers were better equipped to fight the elements, and as a result reaped larger reward from their efforts.

It would appear that oil is the favored fuel, and that from 75 to 100 fire pots to the acre are required to insure immunity from killing temperatures. This means that the fruit grower is expected to expend on frost insurance about \$10.00 per acre. Where the revenue may amount to four or five hundred dollars per acre this amount is comparatively insignificant. But on the other hand it means a good deal to the grower who is struggling under the handicap of insufficient capital and waiting impatiently for the orchard to reach the productive period to allow him to square himself in the financial world.

Possibilities of this kind tend to throw fruit growing enterprises in the hands of capitalists, those who are able to command capital. To some extent this is regrettable.

WEATHER CONDITIONS

IN THE EAST

Although the latter part of April and the fore part of May were unseasonably cold and greatly in contrast with the warm wave of the preceding weeks, yet the danger frost line does not seem to have been passed, and the outlook for a good crop of apples, pears and peaches in the western part of the State of New York is excellent. Small fruits, including strawberries, promise well. Here and there away from the tempering influence of large bodies of water, peaches were considerably injured.

IN THE MIDDLE WEST

The damage to the fruit crops in the Middle West is undoubtedly discouragingly heavy. Reports from Michigan say that peaches are destroyed in unprotected situations and injured practically everywhere. Apples and pears are very much hurt. Oceana county suffered heavily.

In Indiana and Southern Illinois conditions are very irregular. Some orchards appear to be cleaned out while others promise a fair crop, but the damage appears to run everywhere from complete destruction to something like fifty per cent of a crop.

Georgia reports show that injury varied from little to severe, meaning 10 or 15% to 75 or 80% destroyed. So far as we can learn the cold wave did not seriously effect conditions west of the Rockies.

Personal Mention

C. W. McNair, Dansville, N. Y., called at the office on the afternoon of May eighteenth.

Wm. C. Moon, Morrisville, Pa., made a short call upon the Business Manager on May 20. He was in Rochester a short time on business.

Mr. J. McHutchison of McHutchison & Co., New York, returned from abroad May 12, on the steamer "Oceanic". He reports a very pleasant trip.

Mr. W. van Kleef, Jr., representing W. van Kleef & Sons, Boskoop, Holland, spent several days in Rochester, May 19 to 21. He had just come from western points and reported business to be better than last year. After visiting nurserymen in this section he left for New York, Philadelphia and other cities in the East. Mr. van Kleef sails June 8, on the Lusitana.

H. G. Benckhuysen representing H. den Ouden & Son, The Old Farm Nurseries, Boskoop, Holland, called upon us May 17, to make our acquaintance and talk over business conditions. Mr. Benckhuysen had just come from Iowa and Illinois and reports that everywhere prosperity seems to reign. He left for Boston and other eastern points. June 14 is the date on which he will sail for Holland.

PETER OF THE WILD WEST

Peter Youngers of Youngers & Co., Geneva, Neb., in the days of yore was a great fighter and hunter on the plains of Nebraska, so F. A. Weber, chairman of the Entertainment Committee, tells us. Mr. Youngers has promised to meet the convention delegation at some point near St. Joseph, Mo., and will be ready to tell "the boys" some stories about the way they "used to fit" the Indians in them days out on the sandy prairies of Western Nebraska. What Pete don't know about that country isn't worth telling. He can show points "way off yonder" where he camped out and shot buffalo and stalked deer, etc. Gracious Peter!

HOW CAN HE?

Chairman Weber wants to do two things at once, to wit, be in St. Louis when the Rochester car arrives and yet be in Denver one day ahead of the schedule to complete arrangements with his committee and with the Denver people. We are sorry that we can offer no solution that will enable him to carry out the double program.

A COMMENDABLE THEFT

Chairman E. P. Bernardin of the Exhibits Committee invaded the sacred precincts of the family album to send the NATIONAL NURSERYMAN his photograph to be placed along with those of the other Chairmen of Committees. Such domestic audacity is truly commendable especially when the cause is so worthy. Will some of our Nurserymen friends go and do likewise? All of the pictures that should be in our Hall of Fame—some call it the Rogue's Gallery—are not there.

WINFIELD RASPBERRY

The year book of the United States Department of Agriculture for 1909 illustrates the Winfield Black Raspberry, introduced last year by the Winfield Nursery Company of Winfield, Kansas. The special features of value possessed by this variety are earliness, good quality, vigor of plant and general hardiness.

PRACTICAL POINTERS

The Growing of Apple Stocks

There is a decided difference of opinion among nurserymen in this country as to the value of American grown and European grown apple stocks. Some have good success with native produced stock while the faith of others rests almost solely on the European product. The following statement by Orlando Harrison of J. G. Harrison & Sons, is strongly in favor of the European product. We are quite sure that many will differ with him on this question and we shall be glad to hear the experience and opinions of others. We see no good reason why American growers cannot produce with a proper system of cultivation in a suitable locality just as good a stock for budding or grafting as can be produced in the Valley of the Loire or elsewhere in France.

"This is one subject that I have worked on for two or three years. Some years ago we bought American grown apple seedlings; now we are buying imported, French grown apple seedlings. A friend of mine said, 'you will find that French grown seedlings are the best, try a few.' I did so. The next year we bought one million seedlings. We cabled and bought our entire planting from France and budded them, and they have been very satisfactory. Some seasons we can't buy all we need and are obliged to buy where we can get the best. Last season I said that I would investigate to see whether it is profitable for us to continue to import French seedlings and pay \$2 per thousand duty, an enormous price for freight and seedlings. So I made a trip to Europe to investigate, and I think I visited every fruit tree grower that could be found in England, France, Holland, Switzerland and Germany. I wrote to all of the entomologists of the United States before sailing and asked for questions to put to the foreign growers. All of the entomologists aided me in this very much. I asked those people what seed they grew their seedlings from. French crab is the reply, because they are grown here in France. Where do you get them, was asked. Cider mills. I stayed there six weeks to ascertain if possible why their seedlings

were better, that is seemed freer from crown-gall and aphids and better matured root, and the wood was better matured. The wood was harder.

I learned that the secret of the apple seedling business in France is that they grow these seedlings and let them remain in the nursery until they are thoroughly matured. They are allowed to stand until the leaves drop of their own accord. There are few extremes in heat or cold in central France and this is one of the essential features. These seedlings grow very slowly and mature well. In France, they have cheap, expert labor. Seedlings are taken up in December if ripened well, shipped in January; then you get a well matured seedling. I followed this up at length and I think, gentlemen, the secret of the superiority of the French seedling over the American is, first, the soil they are grown in, second, the climate, and third, the cheap skilled labor; but more than anything else the climate and labor. I am convinced that the Frenchmen are growing better seedlings than we are growing here, because we have not the patience to grow them as they do. They let them stand until the leaves have ripened on them, which is very important. Results have been when French seedlings are transplanted in our soil; they take bud well, have a good branched root. In this country most of our growers try to get them out of the ground too early. This should be remedied and seedlings grown here to save expense of duty; in many cases the vitality of the seedling is injured, and this is the same with the nurserymen. We, nurserymen, want money just as badly as you fruit growers. This is true with the apple seedling people; they get them out so early that the seedlings are not matured, the wood is soft and they do not make as strong growth of trees as they should. With the pear the condition is much the same. They said that to obtain the best results from growing apple seedlings in France, never to use the same soil a second time in ten years. Most of the land is prepared by growing potatoes the year previous to growing the seedlings."

OPPORTUNITIES FOR WOMEN IN HORTICULTURE

Horticultural work is making a strong appeal today to women, and there are phases of the work for which they are particularly fitted. The subject of "Horticulture as a Profession for Women" was presented before the Massachusetts Horticultural Society by Miss Laura Dawson of Jamaica Plain on March 5th to a large and interested audience.

To succeed in the growing of flowers for the retail trade, one of the most important of horticultural pursuits, Miss Dawson pointed out the necessity of possessing executive ability, and in addition to high scientific knowledge requisite for growing flowers for the wholesale trade, good health and tremendous nerve force are essential. Women can successfully grow orchard fruits, especially when they have in connection a plant for putting up fruit in cans, and they have

successfully grown fancy vegetables for market. Miss Dawson believes no woman should attempt landscape gardening without possessing more than the average strength, nor the raising of plants for landscape gardening, though the growing of herbaceous plants should afford them an opportunity. There should also be opportunities for women as consulting gardeners, and as writers on horticultural topics.

Germany has five horticultural schools conducted by women. In England there are two good horticultural schools exclusively for women. In the United States there are opportunities for women to learn horticulture in private horticultural schools and in the state agricultural colleges. A school of horticulture for women is soon to be opened near Philadelphia and the students at Wellesley and Smith colleges may take horticultural courses.

F. H. R.

REPORT OF NURSERY INSPECTOR, DEPARTMENT OF AGRICULTURE, NEW YORK

G. G. ATWOOD

The Commissioner of Agriculture of the State of New York is charged with the enforcement of the sections of the Agricultural Law relating to insect pests and fungous diseases dangerously injurious to trees.

Twenty-five inspectors and assistants are now engaged in the work which may be classified in general as Nursery Inspection, Shipment Inspection, Foreign Shipment Inspection, Orchard Inspection, Brown-tail and Gipsy Moth Inspection, City or Town Lot Inspection.

The Department is also charged with the enforcement of the laws relating to barrels used in packing apples, pears and quinces, the proper labeling of New York State fruit, the issuing of certificates to manufacturers and dealers in insecticides and fungicides, and the suppression of disease among bees.

For the purpose of handling the large correspondence of the Department, a Bureau of Horticulture was designated by Commissioner Pearson to systematize the work done along lines above referred to.

A brief statement of what the records show of work done in 1909 together with brief comments follow:

Nursery Inspection: The nurseries of the State embrace 10,804 acres and contain 41,650,000 fruit trees, 10,951,000 ornamental trees and 4,584,000 shrubs, 40,200 vines, 5,900,000 currants and gooseberries; 1201 acres of inspected vineyards, 402 acres of small fruits, 1,300,000 Herbaceous plants. They are under the care of local or resident inspectors whose services are available and are constantly required by the nurserymen who cordially work in harmony with the Department in attempts to protect the great interests involved from depredations by insect pests and damage by fungous disease. Nurserymen are not permitted to ship diseased stock and most of them begin to realize the great importance of closer scrutiny of their own plantings and the fumigation of their buds and scions.

Five hundred and forty-five certificates of inspection were issued to 560 state nurserymen; 625 duplicate certificates for filing in other states were supplied.

Horticultural Bulletin No. 3 was issued by this Bureau. It gives the orders of the Commissioner to Nurserymen, Custom House brokers, Dealers, Importers and Transportation Companies, and also other information especially an abstract of the requirements of other states relative to certification, fumigation and transportation of nursery stock.

Shipment Inspection: It is intended to inspect at point of destination every shipment of nursery stock brought into the state. Information relative to shipments comes from Importers, Transportation Companies and others. The Commissioner has ordered that no package of nursery stock shall be opened without his consent until an inspector can be present.

One hundred and forty-nine cars, 4,600 boxes, and 658 bales containing 770,000 trees and 2,800,000 shrubs and other plants were inspected in the spring and fall of 1909. Over 8000 trees and plants were infested with San Jose Scale.

Foreign Shipment Inspection: In June, 1909, nests of brown-tail moths were found coming into the state from France. Eight hundred and sixty shipments arrived during the early months of the year and 4,566 boxes and packages were inspected and over 7,000 nests found. Subsequent inspection of plantings were made and it is believed that no brown-tail or gipsy insects have yet found a foothold in New York State.

Our system of reports showed that 529 shipments embracing about 7,000 boxes and packages were going to thirty-eight other states, the prompt reporting of which to the authorities of those states enabled them to control the pest by the discovery of large numbers of nests. Generous thanks for our action have been given this Department.

In the early summer of 1909 it was discovered that large shipments of Pines from Germany were infected with a dangerous fungous disease not sufficiently developed to be discernible at the date of importation. Eighty-four plantings were made embracing 1,496,000 trees all of which were carefully examined. The history of this is set forth in our Horticultural Bulletin No. 2 and the peculiarities of this destructive fungus pointed out. Copies will be sent on application.

Orchard Inspection: The force of inspectors at our command is too small to attempt a canvass of all orchards in the state, but we have been able to inspect the orchards of all applicants. As lime-sulphur solutions properly made and applied have proven that San Jose Scale can be controlled, most commercial orchardists are willing to use it but occasionally our authority has to be exercised to awaken delinquents. We have recorded inspection in 1909 of 2,383 orchards covering 15,256 acres with 1,262,063 trees. Reports show the following trees, infested and diseased:

San Jose Scale	35,000
Yellows and Little Peach	12,600
Black-knot	1,250
Pear Blight	500

Diseases in the great peach belts are receiving annual attention and the results indicate ultimate control.

Fruit Barrels: Considerable attention has been given to the use of standard barrels used in packing, apples, pears and quinces. Conditions were found improved over 1908 but a few cases are before the court because short barrels were used unlawfully.

Insecticides and Fungicides: Two hundred and four certificates were issued to manufacturers and dealers as provided by the Agricultural law. All of these commodities offered for sale must be labeled to show the percentage of essential ingredients.

The season of 1909 was a strenuous one for the inspectors of the state. The importance of the work is made apparent when Blister Rust of the Pine comes to us from continental Europe, when brown-tail and gipsy moths come from France and are very likely to be sent in on nursery stock, logs, cars or boxes from some New England states where the authorities, knowing the great difficulty of inspection for Gipsy-moth eggs simply say they cannot give reasonable assurance that stock is free; when imported ermine cherry moth, which was found by one of our inspectors escaped

from an European shipment; and when certain scale insects and other pests are coming from Japan.

The Editor asked for my story in brief. Condensed as it is, I want particularly to ask the nurserymen to use still greater care in buying their stock, greater care in controlling known pests and also to keep in very close communication with the authorized state inspectors to the end that we may be successful in delaying as long as possible an invasion of insects and diseases that threaten the Horticultural industry of the country with loss possibly very great in the future.

ILLINOIS LEGISLATION

The state legislature of Illinois has passed a bill empowering the state entomologist to prescribe certain precautions whereby nurseries and orchards may be prevented from infection by dangerous insect pests, and contagious plant diseases. This places the matter largely in the hands of the state entomologist.

FRUIT GROWING IN MISSISSIPPI VALLEY

W. P. STARK, LOUISIANA, MO.

"The possibilities for fruit growing throughout the entire valley are great and the demand is there, yet it is not surprising that growers have neglected orchards since they find corn growing more lucrative than apple growing under existing conditions which are different from the conditions of a few years ago, said Mr. Stark before the Farmers' Congress at St. Louis. It is necessary to adopt the up-to-date methods of the west, for there fruit growing is reduced to a practical science and operated strictly on business principles. This has had as much to do with their success as the soil or the climate.

"The question has been asked: 'Will not the western orchards monopolize the market?' Yes and no. The answer lies with the orchardists of the central west and the east. Missouri is peculiarly and most favorably located as a fruit growing state. This has been proven by many profitable crops harvested. True, we sometimes have wet springs and late frosts and we miss a crop now and then, but even some of these unfavorable conditions can be avoided. In the west, they solve the problem of raising the temperature by orchard heaters, thus saving the crops. 'Since the Mountain would not come to Mahomet, Mahomet went to the Mountain.' During the past season, some work has been done along this line and they have been partially successful in fighting the severest spring freeze in many years. It is a lamentable fact that throughout these sections thousands of apple trees have been cut down or neglected until practically worthless, simply because the growers are discouraged at repeated failures. There is nothing seriously wrong. The difficulty is simply that the orchardists have not adapted themselves to changed conditions and it is necessary that educational work be extended among them.

The Agricultural College can not do all of this work for it does not come in contact with many of the older generation. It must be done through organized boards and farmers'

institutes as well as the co-operation of the states. The adaptability of new varieties must be tested as well as methods improved and a great deal of work has already been done along this line towards simplifying the problem. For the home orchard, a number of kinds of fruits are desirable, but for commercial purposes each region can produce several varieties or more to best advantage and should not attempt to grow and ship other sorts which another region can produce better. In the west, their methods are intense and their yields maximum. They are content with nothing else. They change their varieties to suit conditions and they think nothing of working over the tops of orchards of such inferior varieties as Ben Davis, or Mo. Pippin. "Why should we grow the poorer varieties when we can just as easily grow the better quality fruit that will command more remunerative prices?" Last year they could not ship Mo. Pippin and Ben Davis in competition with Eastern apples, but they could ship the high class varieties such as Delicious Jonathan, Stayman Winesap, and Rome Beauty.

"The markets everywhere are demanding higher quality and learning to discriminate. Col. Dalton and others produce large, attractive Jonathan apples along the river bluffs north of St. Louis. The Grimes' Golden is a fitting companion to go with the Jonathan and nowhere does the Grimes grow to higher perfection, not even in its own West Virginia, than on the clay lands of Missouri and Illinois. From Calhoun County northward and thence westward to Glenwood, Iowa is the home of the Grimes. The prize-winning Grimes at the Paris Exposition were grown by Mr. Fred Shaw of Pike County, Illinois. A California man, after sampling some Grimes here, said they were the finest apple in the world and asked what the land was worth which produced such apples. We said \$40 per acre. He replied that land of such producing capacity should be cheap at \$400 per acre.

"Cherry growing has never been given the attention it should receive. The market is never half supplied with small fruits. The cherry, especially the Montmorency type, which are adapted to the valley, are hardy, bear large crops regularly and bring good prices on the local markets. They require very little water and can be grown in the western plains country without irrigation. Cherries come into bearing young and for this reason many growers have been planting them as fillers in the young apple orchards. They yield some very profitable crops before it is necessary to cut them out in order to make room for the permanent apple trees. It costs no more to cultivate an orchard with the fillers than without.

"The growing of Kieffer and Garber and others pear is an industry that is overlooked and neglected. Last year a big crop moved out of Pike County for \$2.50 to \$3.00 per barrel. The orchard was neither cultivated, pruned or sprayed. The fruit grew unthinned. Had they been sprayed and thinned a couple of times and properly boxed, they would have yielded the owner a crop equal to the entire value of his farm. Our list of varieties which are especially adapted to the different regions is constantly growing. Men are giving their lives to the securing, producing and development of new kinds of fruits as well as grain and livestock."

Business Movements

GENEVA, N. Y.—On April 21st, 3,900 peach trees were disposed of by auction to Timothy Linnehan for the sum of \$1.00. These trees comprised a shipment which had become damaged in shipping and had been seized by Officer Hawkins upon an attachment issued in favor of the Ontario Nursery Co., against the Fraser Nursery Co.

MEDFORD, ORE.—The Rogue River Valley Nursery Co. has leased 30 acres of land on which over 100,000 seedlings are growing. C. F. Cook, F. H. Cook and B. Franklin are the incorporators and will have their head offices at Medford.

ATLANTA, GA.—The Habersham Orchard and Improvement Co. has just been incorporated with a capital stock of \$60,000. Incorporators, N. T. Poole, D'Anson Isely, F. A. Quillian and J. W. Pritchell of Nashville, Tenn.

CHICAGO, ILL. A. Ostberg Seed Co., has incorporated with capital stock \$100,000. Seed, florist, farming and agricultural implement business.

KNOXVILLE, TENN.—A nursery for the propagating of shade trees is soon to be established at Knoxville, Tenn. This is the decision of the Park City Civic Improvement Association, whose purpose is to secure a uniform growth of shade trees throughout the city. The trees will be sold to the citizens at cost, and will be accompanied by instructions as to planting, care, etc.

CALIF.—A movement has just been started in Paradise, Calif., by Dr. W. E. Mack of the local technical school, with a view of enabling growers to secure olive trees without the necessity of importing them from points outside of Butte county. A nursery of 60,000 trees is already in growth. The trees grown in Butte county are free from diseases and pests which often infest imported trees.

WASHINGTON.—Nursery development and extension is moving on rapidly. The Washington Nursery, located at Toppenish, is operating 300 acres devoted to nursery stock. On this area some 5,000,000 trees have been planted.

ILLINOIS.—A new nursery company has been established at Fulton under the name of the Riverside Nursery Company. This Company is to make a specialty of fruit trees.

TEXAS.—At Tyler, Texas, was organized recently the East Texas Nursery Company, with a capital stock of \$50,000.00, incorporated by E. W. Minns, C. C. Crews, and others.

Mr. J. M. Yates, the well known manager of the nursery company near Sherman, is establishing a branch nursery near Tuler where he expects to develop the truck and berry business in an extensive way.

NEW YORK.—A new movement bearing upon the conservation of watersheds and water supply has been started by the board of water commissioners of New York, who are starting nurseries in the Ashokan district near Kingston for the purpose of growing trees to protect the reservoirs and dikes of the aqueduct system. Pines and locusts are to be used extensively.

DIRECTIONS TO THE RETAIL TREE BUYER

The following instructions governing the purchase of trees by the planter were presented by Mr. W. J. Wright of the Pennsylvania State College in a recent address before a horticultural society.

1. Order direct from a firm of good standing which grows its own stock or has it grown under contract.
2. Buy of your local nurseryman if he fulfills these conditions.
3. Place your order early.
4. State specifically just what you want, both as to the varieties and style and class of stock. Don't leave any room for supposition.
5. Give explicit shipping directions and state just when you wish stock delivered.
6. Remember that the purchase price of trees is a small part of the orchard cost. A few dollars extra spent for trees, if it will purchase just what you want, will be well spent.
7. Make it your business to see that trees are not delayed in transit.
8. Carry out your part of the contract by seeing that the trees are well cared for on arrival and that they are properly planted.

FERTILIZER INFORMATION

William H. Bowker of the Bowker Fertilizer Company, (Boston, New York and Buffalo), has just gotten out a valuable little booklet bearing the title "Plant Food, Its Sources, Conservation, Preparation and Application." In it he discusses the essential elements of plant food, the "bulk" in fertilizers, chemically mixed fertilizers vs. "dry mixed" and "home mixed," soil bacteria, with a comparison of stable and commercial fertilizers. General and specific directions are given for the application of fertilizers.

The article is very interesting reading, and is full of valuable information.

MR. HEIKES IN EUROPE

Mr. W. F. Heikes of Huntsville, Ala., sailed May 4th, for Europe where he will visit the principal nursery districts of France and Holland. He expects to return about the 25th of July. His friends will miss him at the annual meeting.

FLOWER MARKET FOR NEW YORK

The wholesale florists of New York are interested in the establishment of a plant and flower market. They have chosen a site, have appointed committees to wait upon the city authorities, and the movement bids fair to reach a successful completion. The location proposed is at 59th St. & 1st Ave., under the piers of the Queensboro bridge, Manhattan. This area gives a floor space of 170 by 275 feet, while the height of the tile ceiling is from 40 to 60 feet. It provides also wagon space on the outside, and when the piers are connected with glass doors and windows the conditions ought to be favorable for an attractive and suitable market place for the sale of plants and flowers.

Quiz Column

I. STORAGE IN MILD CLIMATES

EDITOR NATIONAL NURSERYMAN:

I would like to ask through the columns of the NATIONAL NURSERYMAN, how trees can be carried safely through the cold weather of winter heeled in, in open ground, tied in bunches of tens; where the lowest temperature is only for a few hours in the morning, and where the coldest weather is only for a week or two; i. e., at what degree of cold is it necessary to have a cellar to store trees in?

Modesto, Cal.

T. J. TRUE, Stanislaus Nursery.

ANSWER

The amount of cold which trees will stand when heeled in the ground is conditioned on at least two things: (1) on the kind of tree, and (2) on its condition in respect to dormancy. Hardy trees like apples, pears, cherries and plums, will stand zero weather without injury if well ripened and properly buried in the ground. Of course tender fruits like citrus stock will be destroyed by any such temperature if stored in the open. In the case of a light frost, that is to say a freeze of say five or six degrees, whether injury would be severe or not would depend upon the duration of the frost and upon the amount of protective soil covering which the plants had been given. If the low temperature lasted only for a few hours it is reasonable to suppose that even a light soil covering would give heeled in plants adequate protection from frost. If this freezing weather, on the other hand, were to continue for some days the soil would be penetrated by the frost and injury would come to the plants to a serious degree. In your case, if you are not handling the tenderest stock, it seems to us that sufficient protection might be obtained by means of a packing shed inside of a storehouse or cellar. You could very readily raise the temperature in a shed of this kind during a cold spell by means of portable heaters, and thus avoid the considerable expense of constructing a regular storage house.

If nursery stock is well grown and well ripened before digging it will withstand much more frost than if dug when green and succulent. ED.

2. STORING ROSES

We would like to get through your columns some advice in regard to the keeping of roses in storage over winter. Possibly you can refer us to some article that has appeared in your paper heretofore on the subject. We suppose that all nurserymen have experienced a similar trouble in a greater or lesser degree.

D. Z. M.

ANSWER BY JACKSON & PERKINS, NEWARK, N. Y.

We dig our roses as late as possible, and only when the plants are thoroughly dormant and the wood ripe and hard. We strip them by hand. We tried using a tree stripper on roses, but it wouldn't work. We found that wherever the canes were bruised or broken, decay set in before spring and the plants came out with black and dead wood in the tops.

We strip roses altogether by hand. The plants are racked up in our cellars, the tops out, and with plenty of room for the air to circulate freely. We cover the roots of the plants, layer upon layer, with moderately damp sand. Kraut or moss will not answer. It is the same as having the plants heeled-in in sand, and in cold cellars under practically the same conditions as exist out of doors, with the exception that, while the buildings are kept cold, the temperature is not allowed to go low enough to result in any injury to the stock. Handled in this way, there should be no difficulty whatever in cellaring roses. We cellar more than three-quarters of a million of them every winter, and have no trouble whatever with our plants. We are always careful however, not to dig our roses until they are thoroughly dormant and *ready* to go in the cellar. If the wood is at all soft, the plants will come out with dead tops in the spring. Then, we make it a point to see that the cellar is not only well ventilated, but thoroughly aired as often thru the winter as the weather will permit.

COURSES AND BOOKS ON LANDSCAPE GARDENING

EDITOR NATIONAL NURSERYMAN:

Can you inform me where I can get in touch with a correspondence course on "Landscape Gardening." Please recommend me the best text-books on the subject.

A. T. H.

ANSWER

April 9, 1910.

The only correspondence school in landscape architecture, or landscape gardening as it is more frequently called, that we know of, is that conducted by the Home Correspondence School, Springfield, Mass. This is an elementary course in the subject, which should however, be of considerable value to the beginner in placing him in possession of the principles of landscape gardening, and making him acquainted with the materials with which the landscape gardener works.

Among the best books for reference are: "Landscape Gardening"—Waugh, containing a discussion of the underlying principles. This work should be studied first. It may then be followed by "How to lay out a Garden"—Kemp, and "Landscape Gardening"—Maynard. These two latter books take up materials, methods and details, and properly follow a discussion of principles as outlined in the first reference given. If these books are carefully studied in conjunction with the correspondence course the student will gain a good general idea of the field of landscape art.—ED.

A QUESTION ON FERTILIZERS

March 5, 1910.

NATIONAL NURSERYMAN:

Now, we want to ask a question. We are preparing a plot of ground to plant to apple seedlings and want to drill a good commercial fertilizer in before planting. Our soil is a sandy loam. What kind would you advise using and in what proportion? What would you think of buying potash and using something as a filler?

Damascus, Ohio.

WEST BROS.

ANSWER

We are of the opinion that it is just about as safe and reasonable for a man to offer suggestions on fertilizing a soil which he knows nothing of, as to give a young man specifications for a bride, knowing nothing of the characteristics of the male party concerned.

It is altogether probable that if you purchase potash, and apply this freely, you would be wasting your money. Most soils contain enough potash for growth of ordinary crops if the soil is kept in good

physical condition by maintaining its normal proportion of humus. In the growing of apple seedlings what you want is healthy, vigorous growth. You want length and caliper. This kind of growth is secured by the use of nitrogenous fertilizers. At the same time it is not desirable to force fruit stocks, and we would rather depend upon the growth that you would secure as a result of well adapted, well prepared and well managed soil rather than that which might be obtained by heavy feeding with nitrogenous fertilizers. Not knowing what kind of fertilizer you need, we would suggest a basic one containing some of each of the elements of fertility. We would suggest a fertilizer containing say, 3% nitrogen, and 4% each of phosphoric acid and potash.

In combining this you can figure that your nitrate of soda, if that is your source of nitrogen, will contain 15½% of this substance; acid phosphate as a basis for phosphoric acid 14%; and muriate of potash as a source of potash 50%. You can buy these raw materials and mix them yourself, or you can order from a fertilizer company this combination. Do not think that this is absolutely the best that you can use, for it is only a guess on our part. One really ought to make experiments on his own ground in order to find out what the needs of his soil are.

EDITOR.

Doings of Societies

AMERICAN PEONY MEETING AND EXHIBITION

The 1910 meeting of the American Peony Society will be held at Horticultural Hall, 300 Massachusetts Ave., Boston, Mass., in connection with the regular peony show of the Massachusetts Horticultural Society, Thursday and Friday, June 9-10, 1910. This date subject to change if weather conditions require.

A. H. FEWKES, Sec., B. H. FARR, Pres.
Newton Highland, Mass. Reading, Pa.

Obituary

HENRY G. McPIKE

This noted grape grower and plant breeder died at his home in Alton, Ill., on April 18th, at the age of 81 years. Mr. McPike was essentially an amateur plantsman, with an intense love of plants and a keen eye to detect favorable variations. He was the originator of the McPike grape, one of the largest berried grapes of all the native varieties. He occupied a place of trust several times during his career in connection with municipal affairs.

ANTHONY M. McLAREN

Anthony Murray McLaren, the proprietor of the Westwood Nurseries, Westwood, Mass., and for forty years proprietor of a large florist business at Forest Hills Square, Boston, died suddenly of a shock of paralysis on April 27th, having been taken ill on his way home.

Mr. McLaren was a native of Scotland, born in 1830, and after receiving his early education at Drummond Castle, attended Ochtertyre, the great training school for landscape gardening. He left his native land about 26 years of age, going to St. John, N. B., where he remained for five years. He then came to Boston and worked for a time on various estates in the suburbs. For four years he was gardener at Forest Hills Cemetery.

For forty years Mr. McLaren conducted a florist business at Forest Hills Sq. Later he moved to Westwood, where he has since conducted his nurseries.

Mr. McLaren laid out many beautiful estates in different parts of the country. He was a member of the Massachusetts Horticultural Society, and the winner of many prizes at its exhibitions.

100,000 Apple. 1 yr, 4 to 5 ft. and 5 to 6 ft., for Fall 1910. We grow the finest 1 yr apple in the world. Figure with us.

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We also have an extra nice stock of one year **CURRENTS**. Send us your want list for prices.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

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50,000 PEACH TREES, 1 yr. from bud.
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Superior. Gandy.

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Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

Note and Comment

THE INTERMOUNTAIN FRUIT JOURNAL

Is the title of a new horticultural paper with headquarters at Grand Junction, Colo. The president and treasurer is Mr. C. F. Yeager; editor and manager, Clyde H. Smith; traveling representative, Guy Knox. The fourth number of Volume 1 is before us, and comprises 40 pages of reading and advertising matter, exclusive of covers. It is an attractively printed journal, containing up-to-date information on fruit growing and fruit projects in the intermountain region.

FREE SEEDS CAUSE AMUSEMENT

The annual discussion upon the free distribution of seeds by congressmen was precipitated in the house, January 31, by Representative Moss of Indiana, who proposed an amendment to the agricultural bill increasing the appropriation for garden and flower seed from \$43,000 to \$100,000, with a provision that the seed should be distributed by the secretary of agriculture. This proposition was voted down. Amusement was created by Representative Kustermann of Wisconsin, who said his constituents criticised congressmen "because their arguments would not go down and their seed would not come up."—*Washington Star*.

THE FRUIT GROWERS OF THE NORTHWEST TO UNITE

It has been inevitable that in the development of the various fruit sections of the Pacific Northwest that local rivalries should creep in. This has been apparent in connection with the two noted apple shows at Spokane where the products of one or two of the most famous apple producing valleys were noticeable by their absence. This sort of selfish rivalry can only result in the injury of the industry as a whole. There is now a movement on foot for the uniting of the fruit interests of the Pacific Northwest into one complete union, which will include of course the principal fruit valleys of Washington, Oregon, Idaho and Montana. It is not probable that the British Columbia growers will be included in this scheme for they are separated by the tariff wall.

TRANSPORTATION EXPERIMENTS WITH PEACHES

The Georgia Fruit Exchange has secured the cooperation of the Division of Pomology, Department of Agriculture, Washington, for the purpose of inaugurating experiments in the pre-cooling of peaches in connection with northern shipments. A portable refrigerating plant furnished by the Department will be used in connection with these experiments.

A NEW GRAPE BARREL

Consular Agent A. E. Carleton, of Almeria, Spain, reports the invention at that place of a barrel for grapes, for which many advantages are claimed. The barrel is cylindrical, and has four compartments, so constructed that the grapes will receive all needed ventilation. Each compartment will hold 12 pounds of fruit, which will keep better, it is claimed, than in the present barrel where the whole quantity, say 50 pounds, is packed together. The entire barrel can be made by machinery and there is practically no waste of wood. Any kind of wood may be used. A company has been formed to exploit the invention and enough orders have already been received to warrant the purchase of the machinery needed. The name of the inventor is on file at the bureau of manufactures, Washington, D. C.

—*Gardening*.

BACK NUMBERS WANTED

The Librarian of the Agricultural College, University of Missouri, Columbia, Mo., is very anxious to obtain the following copies of the NATIONAL NURSERYMAN: August, 1907, (Vol. 15, No. 8), and October, 1909, (Vol. 17, No. 10). Will some nurseryman kindly see that the state college gets these two numbers in order that their files may be complete. Our supply has been exhausted. You do not need to be from Missouri to help out.

Clematis Paniculata Strong Plants in Quantity.
Lowest Prices.

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VINCA MINOR, field-grown clumps in any quantity.

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250,000 AMOOR RIVER PRIVET 250,000

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903 Tremont Bld., - - - Boston, Mass.

Our Book Table

BACTERIA IN RELATION TO COUNTRY LIFE. $5\frac{1}{2} \times 6\frac{3}{4}$, 486 pages, including index and glossary. Illustrated. By Jacob G. Lipman, A.M., Ph.D. Published by the MacMillan Company, New York. Price \$1.50 net.

This volume discusses in simple, direct, easily understood manner, the structure, growth and function of bacteria. The relation of bacteria to air and water, and therefore health and disease, is very clearly presented in Parts I and II. In Part III a thorough discussion of bacteria in relation to sewage and sewage disposal is considered. This part is of special interest to towns and cities which are dealing with the problem of safe and practical disposal of sewage. Here we have sewage farms, sewage tanks and filter beds, the sanitary value of sewage irrigation and allied topics, thoroughly treated. Part IV treats of bacteria in relation to soil fertility, and discusses the important function of these micro-organisms in this connection. Again, bacteria in relation to the handling of domestic manures is an important subject, and one not as completely understood as it should be. Part V deals with this phase of the fertilizer question. Parts VI, VII and VIII deal with bacteria in milk and related products, bacteria in relation to preservation of food, and bacteria in relation to fermentive processes as typified by bread making, sugar making, wine and liquor preservation.

The whole volume is suggestive and presently valuable. It is untechnical and may be understood by the most elementary student. It is a volume which can be commended to farmer, nurseryman, country and city dweller alike, with confidence in the feeling that it will be of great value.

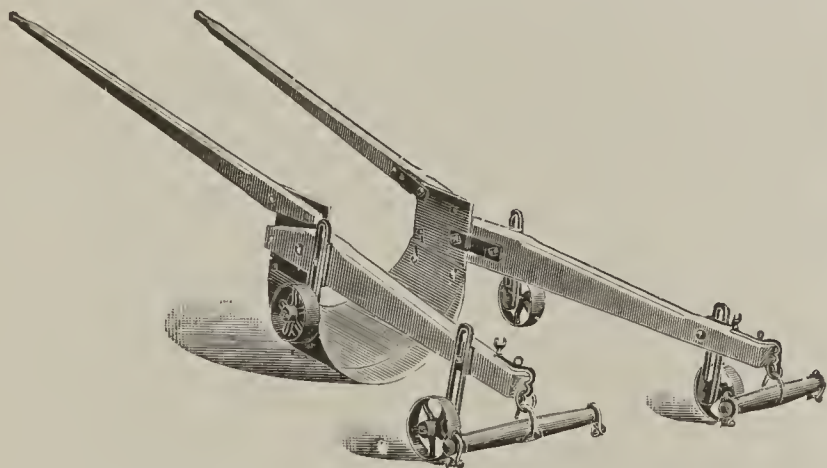
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A COMPETENT FOREMAN, who understands all field and inside work, budding, grafting, etc. Should have knowledge of all lines of work pertaining to the ornamental nursery business and ability to handle men. Address "ILLINOIS," Care of the NATIONAL NURSERYMAN.

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To represent large nursery firm. Must be a hustler, business getter and able to sketch. Experienced man with good testimonials need only apply. Salary offer. "LANDSCAPE," Care NATIONAL NURSERYMAN.

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A competent foreman who understands all field and inside work, budding, grafting, etc. Should have knowledge of all lines of work pertaining to the business and ability to handle men. Address "NEBRASKA," care of National Nurseryman.

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10 experienced budders, June 1st to 15th to bud Apple and Peach. Good location, comfortable quarters. Men from 19 to 49 years of age who are not afraid of work.

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European and Japan Plums,
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Our root system is the finest in the United States. Patrons say our trees make business easy. Why not mail us your want list to be priced? Better still, come and see us, when we will gladly show you through our nurseries, and endeavor to name you attractive quotations.

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Azaleas, Andromedas, Box Trees, Clematis, Climbing Plants, Conifers, Dielytra Spectabilis, Hydrangeas, Kalmias, Koster Blue Spruces, Magnoleas, Paeonies, Plants cultivated in pots, Rhododendrons—hardy Parson varieties, Roses (including all the new and best varieties), Shrubs and Trees.

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Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

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CALIFORNIA PRIVET, one year, extra fine
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CHERRY, 2 year, strong, extra fine, sour varieties
HEMLOCK SPRUCE, mostly 3 to 4 feet
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Your professional reputation depends upon the trees you sell. An order of "named" trees that turn out to be something else will often do you untold injury. Doubtless you have often found it difficult to secure "true-named" specimens, which require to be grown in the South. But here is a satisfactory solution of this difficulty: Trees from

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CONTAINS NO ACID, AMMONIA, SOAP OR ANY
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250 varieties of Climbing Plants.
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5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

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OFFER for Spring 1910

GRAPE VINES—One and two years old. Varieties largely Moore's Early, Concord and Niagara.

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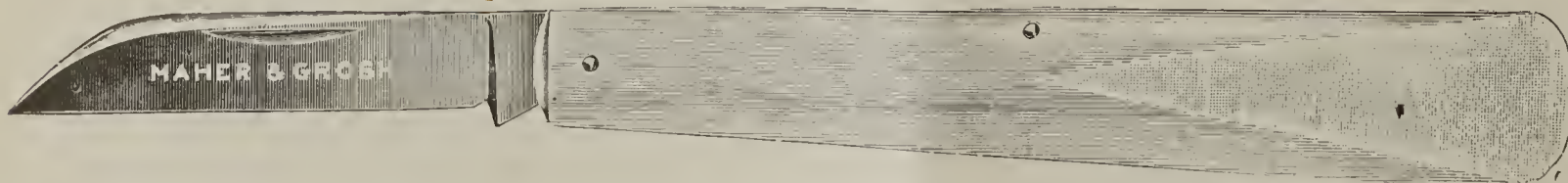
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Nursery Pruner, 50c
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WITHOUT INJURY TO FOLIAGE

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TOBACCO EXTRACT

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ROGUE RIVER (OREGON) FRUIT GROWERS' UNION: “Black Leaf” does not burn nor injure the foliage or the fruit and will eradicate the aphis immediately.

DELTA COUNTY (COLO.) FRUIT GROWERS' ASS'N: “Black Leaf” is the best remedy we have ever found for plant lice on fruit trees.

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MR. A. N. JUDD, Watsonville, Cal.: For all plant lice, and green and black aphis, “Black Leaf” Tobacco Extract is the most gratifying of all washes

PRICE: In 5-gal. jacket cans, 85c per gal.; in 1-gal. cans, \$1; f. o. b. Louisville, Ky. The usual Western price is 90c to 95c per gal. in 5-gal. cans, owing to increased freight.

USUAL DILUTION: For Green and Woolly Aphis, and Black Peach Aphis, 1 gal. “Black Leaf” in 65 or 75 gals. water. For Thrips, 1 to 50 or 60.

TO SAVE YOU FREIGHT: Write us for name of agent nearest you

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We Carry a Large Stock of

BURLAPS

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AT THE LOWEST PRICE

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WRITE FOR PRICES.

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FANCY SHADE TREES CAR LOTS. Ash, Box Elder, Black Locust, Catalpa Speciosa, American White Elm, Soft or Silver Maple.

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And small fruits for wholesale trade

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Have full list of varieties for fall trade with special inducements for orders for late fall
delivery in car lots, or cellared for Spring if desired. Our facilities are unsur-
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Not satisfied with our present large cellars, are now build-
ing one 112 ft. by 240 ft. connecting with and south
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OUR SPECIALTIES ARE

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Moss

Ramblers

Climbers, Etc.

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PLUMS

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Ornamental
Trees and
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1200 Acres

44 Greenhouses

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A BLUE ROSE

The Greatest Rose Novelty of the Century

It flowered with us this season and
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The New Rambler (Violet Blue), hailed
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CRIMSON RAMBLER	DOROTHY PERKINS
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HYBRID PERPETUALS	MISCELLANEOUS ROSES
2,000 ROSE TREES	

March Bulletin, with Grade Counts, corrected to date,
now ready. Send for copy. Want Lists invited; attractive
prices quoted on above and other surplus.

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Growers of The Preferred Stock
Newark, (Near Rochester), New York

March first.

SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
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W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

IN CAR LOAD LOTS

We offer BIOTA AUREA NANA, Cedrus, Deodara, Junipers
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BIOTA AUREA NANA

Figs, Spanish Chestnuts,
Althaeas, Deutzias,
Exochordas, Lilacs,
Philadelphus, Spiraeas,
Weigelas, and other De-
ciduous Shrubs.

Ashes, Elms, Maples,
Weeping Mulberries,
Tulip and Lombardy Pop-
lars, Lindens and Texas
Umbrellas.

Strong field grown ROSES
Standard sorts, budded
and on own roots.

Citrus Trifoliata, Amoor
and California Privets.

AZALEAS, Camellias,
Magnolia Grandiflora,
and other Broad-leaved
Evergreens in great va-
riety

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Fruitland Nurseries
Established 1856

AUGUSTA, GEORGIA
Over 450 Acres in Nurseries

The Farmers Nursery Company

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OHIO

OFFER

APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes Catalpa Bungei, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

B. E. Fields & Sons

Fremont Nurseries

FREMONT, NEBRASKA

Offer a General Line of Nursery Stock

APPLE, Keiffer and Garber Pear, Peach, Cherry and NATIVE PLUM

Our Native Plum are exceptionally fine

GRAPES, Small Fruits, Shrubs

And a large line of

Forest Tree Seedlings

A FINE LOT OF SHADE TREES

W. FROMOW & SONS

Windlesham Nurseries, Surrey, England

Offer 250 acres of Hardy Outdoor Nursery Stock in great variety, chief among which may be noted the following:

Hardy Named Rhododendrons in such varieties as Everestianum, Caractacus, H. W. Sargent, C. S. Sargent, Kettle-drum, Chas. Dickens, Lady Armstrong, Atrosanguineum, Chas. Bagley, Alba elegans and grandiflora, Giganteum, Old Port, Fastuosum fl. plena, Roseum elegans, Delicatissima, Ed. S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the Parson's Hybrids.

Andromeda Floribunda, 20,000 to offer in bushy well grown plants 6 in. to 18 in.

Andromeda Japonica 6 to 18 in.

Azalea Mollis, seedlings from named varieties 4 to 24 in.

Ghent Azaleas, on own roots 12 to 24 in.

Azalea Pontica, the common yellow 12 to 30 in.

Gaultheria Shallon and Procumbens.

Kalmia Latifolia 6 to 30 inches.

Hybrid Tea, Tea, Polyantha and Hybrid Perpetual Roses, strong field-grown stock as Standards, Half Standards and Dwarfs in all leading varieties.

Copper Beech, selected seedling, specially good strain 3 to 9 ft.

Fruit Trees, trained, Espalier and Fan shaped.

Box, Handsworth and Common Tree 6 in. to 5 ft.

Retinospora Plumosa and Plumosa Aurea 6 in. to 6 ft.

Retinospora Pisifera and Pisifera Aurea 3 to 6 ft.

Retinospora Obtusa compacta 6 in. to 5 ft.

Abies Orientalis, Parryana, parryana Glauca and Kosteriana 6 in. to 4 ft.

FOR DELIVERY FALL 1910

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AUGUST ROLKER & SONS,

31 Barclay Street, P. O. Box 752, New York

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

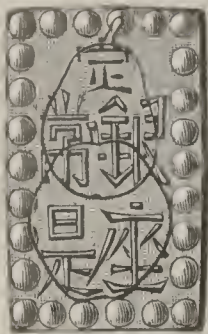
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Spring of 1910 in large quantities as usual:

SPECIALTIES

PEARS—Bartlett and Beurre de Anjou, one year, in large supply. As fine in quality as ever grown.
PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.
PEARS—Assorted leading varieties. One and two yrs. old.
CHERRIES—On Mahaleb. Leading sour varieties. A large block but not as many as usual.
PEACHES—We excel in Peaches, and of these we will have as large and as fine a stock as we have ever grown, both in one year and June Buds.
PLUMS—A light stock of these for this year.
PECANS—We make a specialty of grafted Pecans. These are grown in our branch nurseries at Biloxi, Miss., where the conditions are very favorable for their propagation.
ROSES—Budded. We have discontinued the propagation of Roses at Biloxi. We will have a large stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.
PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.
MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Horseshoe Brand Bamboo Canes

Nurserymen who want a first class grade of Bamboo Canes will find the Horseshoe Brand the best to buy. Quotations on all sizes upon application. Orders should be placed six months in advance for quantities of long poles for staking trees, etc., in order to obtain proper deliveries.

Don't delay--write now.

Ralph M. Ward & Co.

12 WEST BROADWAY, NEW YORK

RAFFIA for Quick Shipment

IF YOU find you have overlooked ordering your supply of Raffia or if you have not ordered enough and are going to run short for your budding, and want another lot pretty quick, send us your order and we will ship it at once. We have a large stock of "RED STAR" BRAND on hand at all times and prompt shipment can be made of any quantity, whether it's pound lots or bale lots.

"RED STAR" BRAND RAFFIA

is guaranteed to be A No. 1 quality. You assume no risk in purchasing. Should any prove inferior, you don't pay for it.

SAMPLES AND PRICES FURNISHED UPON REQUEST.

THOMAS MEEHAN & SONS,

Direct Importers of Red Star Brand Raffia

Dresher, Montg. Co., Pa.

B. & A. SPECIALTIES.

BLUE SPRUCE, all sizes, 2 to 7 feet.
WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.
ROSES, Hybrid Perpetual and Hybrid Tea varieties.
CONIFERS and EVERGREENS, 150 varieties.
RHODODENDRONS, Hardy Hybrid and Maxima, 50 varieties.
EVERGREEN SHRUBS, 35 varieties.
FLOWERING SHRUBS, 350 varieties.
JAPANESE MAPLES, 25 varieties.
ORNAMENTAL DECIDUOUS SHADE TREES, 50 varieties.
WEeping and STANDARD DECIDUOUS TREES, 50 varieties.
HEDGE PLANTS, 25 kinds.
HARDY VINES and CLIMBERS, 75 varieties.
PLANTS and TRAILING VINES, 12 varieties.
SPRING and SUMMER FLOWERING ROOTS and BULBS, 250 varieties.
DECORATIVE and FLOWERING PLANTS, 50 varieties.
TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries Pears, Apples, etc.
SMALL FRUITS, 75 varieties.
NEW and RARE TREES, SHRUBS and EVERGREENS, 35 varieties.
MISCELLANEOUS NEW and RARE PLANTS and VINES, 25 varieties.
HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.
NEW and RARE CHOICE HARDY PERENNIALS, 65 varieties.
ORNAMENTAL GRASSES, 30 varieties.
HARDY FERNS, 50 varieties.

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VISIT NURSERIES

BOBBINK & ATKINS,

NURSERYMEN AND FLORISTS,

RUTHERFORD, N. J.

FRANS VAN DER BOM

THE HORTICULTURAL AGENCY, Oudenbosch, Holland.

Before placing your orders ask for our prices.

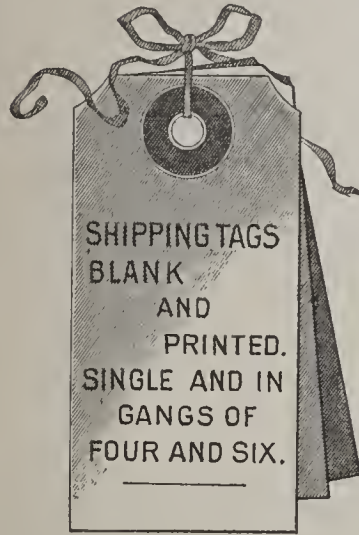
Andromeda	Dracaena	Manetti
Araucaria	Evergreens	Norway Maple
Areca	Flowering Shrubs	Ornamental trees
Aspidistra	Forest Trees	Paeonies
Azalea (Hardy)	French ornamentals	Planes
Azalea indica	Fruit stocks	Phoenix
Bay trees	Hollies	Rhododendron (Hardy)
Beech, purple	Hortensia	Rhododendron (Parsons)
Buxus	Hydrangea	Roses, dwarf
Chestnuts	Japanese Maple	Roses, tree
Clematis	Kalmia	Roses, new varieties
Climbers	Kentia	Schwedler Maples
Cocos	Koster's Blue Spruce	Spiraea
Convallaria	Latania	Thorns
Conifers	Magnolia	Tilia
		Weeping Trees

Send us a postcard and we will mail you our descriptive catalogue by return mail.

Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

CHERRY OFFER

WE offer the trade, in car lots f. o. b. Huntsville, Ala., 75,000 2-yr. cherry, Alabama grown, made up of the following varieties:

Black Tartarian	Dyehouse
Montmorencies	Napoleon
Early Richmond	Suda
Ger. Ostheimer	Windsor
Governor Wood	Wragg

also extra fine 1-yr. and 2-yr. cherry Louisiana and Dansville grown. Special price on car-lots.

Quotations will be promptly submitted on application. Quick action is suggested.

Stark Bro's Nurseries & Orchards Co.

General Nurserymen

Louisiana, Missouri U. S. A.

The Selling Problem

is vital. The Nursery Catalogue that does not make and retain business is an expensive luxury.

We are Specialists

in producing catalogues that fit the needs of the Nursery Business. They are artistic, entertaining, valuable and of moderate cost. Our work represents a STUDY OF THE SELLING PROBLEM.

The New Stock Catalogue

is the most efficient and lowest priced salesman you can get.

Price and specimen pages on request.

W. F. Humphrey

GENEVA, NEW YORK



W. P. STARK, LOUISIANA, MO.
President American Association of Nurserymen.



TREASURER YATES with Entertainment Party doing last lap on Moffat Trip.



GROUP PICTURE OF THE THIRTY-FIFTH ANNUAL CONVENTION.



A Group of Western Nurserymen and their friends who took a leading part in entertaining their Eastern friends. President Stannard and Pete Youngers in front row.



E. S. WELCH, SHENANDOAH, IOWA
Vice-President American Association
of Nurserymen.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII.

ROCHESTER, N. Y., JULY, 1910

No. 12

THIRTY-FIFTH ANNUAL CONVENTION OF AMERICAN ASSOCIATION OF NURSEYMEN

The great annual event in the life of the active American nurseryman has come and gone. The Denver convention belongs to the category of recorded events. It is a part of

at St. Louis on the morning of the 6th. A solid train of thirteen cars loaded with nurserymen left this point on that afternoon. They arrived in Denver the following evening



Members of the American Nurserymen's Association "Seeing Denver"

the history of the American Association of Nurserymen. To say that it marked an epoch would give it undue emphasis. To say that the meeting was entertaining and instructive in the extreme is to give only mild praise. Enjoyable it was from the various standpoints of physical comfort, intellectual interest and technical instruction. The attendance was not up to the Rochester meeting, but excellent considering distance, from the more populous nursery centers. There were a goodly number of ladies, whose memories of Denver are sure to be kindly.

THE JOURNEY WEST

The Rochester "bunch" under the chaperonage of Treasurer Yates joined northern and southern contingents

at six o'clock, being some two hours late owing to the heavy loaded engine (no one else loaded). Earlier trains from Chicago brought in delegates from the Upper Mississippi Valley and adjoining points. The local committee and Chairman of Exhibits Committee were already on the ground with arrangements perfected or well in hand. Much of the success of the meeting is to be credited to the forethought of the Program and Local Entertainment committees as well as the generous attitude of the Denver Convention League. Chairman Weber (entertainment) and Hill (program) were "Johnny's-on-the-spot" and nothing got away from them. The Pacific Coast was represented by Messrs. Roeding of California, McGill and Pilkington of Oregon.

ENTERTAINMENT

Denver and the western nurserymen acting as hosts proved themselves generous entertainers. Automobile drives, theatre parties, and scenic tours were interspersed with the literary part of the program, and indeed closed the meeting. The tour of the last day was one of great interest and enjoyment. These pleasant events were run off as follows:

THURSDAY, JUNE 9TH—2 P. M.

Ladies were taken in special cars to the White City, as the guests of the Denver Convention League and Western Nurserymen.

8 P. M.

Theatre party Broadway Theatre (opposite Brown Palace Hotel) for gentlemen and ladies, as guests of the Convention League and Western Nurserymen.

FRIDAY, JUNE 10TH—8:30 A. M.

At the Moffat Depot, for a trip over the Moffat Road to Corona, as guests of the Western Nurserymen.

SATURDAY, JUNE 11TH

Trip around "The Horn," as guests of the Colorado State Board of Immigration. Leave Union Depot 8:10 A. M.; arrive Boulder 9:10, stop 45 minutes for Automobile Trip.

Leave Boulder 9:55; arrive Longmont 10:30, stop 45 minutes for Auto Ride.

Leave Longmont 11:15; arrive Loveland 11:45, stop 45 minutes for Auto Ride.

Leave Loveland 12:30; arrive Agricultural College 1:00 P. M., stop one hour and thirty minutes at college and Fort Collins; lunch at Fort Collins (pumpkin pie and milk).

Leave Fort Collins 2:35 P. M.; arrive Greeley 3:30, stop one hour and twenty minutes for Auto Ride.

Leave Greeley 4:50, arrive Lupton 5:40, lunch.

Leave Lupton 6:10; arrive Denver 7:00. This program was carried out.

STORY OF THE CONVENTION

President Stannard's gavel called the meeting to order at 9:30 Wednesday morning. He then introduced Col. J. S. Irby, representing Mayor Speer, who greeted the nurserymen with as fine a line of welcome talk as it has been their good fortune to hear for many a year. He very properly called attention to the civic pride of Denver, her beauty, her progressiveness and her ideals. Said Col. Irby:

"If you find while here an unusual love of city you will pardon it. To most of us this is our adopted home. We came here for the pure air and eternal sunshine, and having regained our health, we love Denver because to the natural affection and civic pride is added the great debt gratitude.

"And that is one reason why the malicious muckraker and the political newspaper knocker have not injured the city's fair name. You may have some of these pests in your part of the country—men who, having sprinkled a pinch of salt on the tails of all of the cardinal virtues, have captured them everyone, and are now sighing because there are no other cardinal virtues to conquer. These creatures are noisy, non-progressive and stagnant. They are on the order of the river boat to which Abraham Lincoln used to liken the professional agitator of his day. Lincoln said that this boat had such an enormous whistle that when it was blowing it couldn't move and when it was moving it couldn't blow. These worthies to whom I allude are so everlastingly busy blowing that they never get anywhere and the men whom they malign are doing all of the work of upbuilding this city and state."

The Colonel was followed by Mr. C. H. Reynolds, representing the Denver Convention League, in equally eloquent strain. Col. C. L. Watrous, the veteran nurseryman and soldier of Des Moines, Ia., responded in fitting terms. He acknowledged the æsthetic attractions of the city of Denver

but took occasion to remind the City's representatives that the materials used in embellishing the waste places, as well as the lawns of the millionaires, were furnished principally by the nurseryman whose aim it was to work in harmony with the laws of nature. The way to build up patriotism was to build beautiful, comfortable homes; and in this work the plant grower was a

leading factor. Col. Watrous drew a striking contrast between the conditions educational and otherwise existing half a century ago, when the Great American Desert was regarded as an established geographical fact, and those obtaining at the present time. Much of the change was due to the influence of the tree grower.

PRESIDENT STANNARD'S ADDRESS

This appreciatively recognized the good work of the committees of the Association and recommended that special provision be made to cover emergency expenses of such important committees as Transportation, Legislation and Tariff, and closed with a tribute to the efficient work of Ex-Secretary Geo. C. Seager. The address was referred to a committee who reported later that the excellent recommendations of the President, though not formally authorized in this form, were practically effective, inasmuch as each chairman of these committees might bring urgent matters before the executive committees for authorization according to dictates of circumstances and judgment.

REPORTS OF OFFICERS AND COMMITTEES

The reports of Secretary Hall and Treasurer Yates followed in order and will be published next month. They



How the Ladies Saw Denver

were referred to a committee composed of C. M. Hobbs, Ind., Geo. S. Josselyn, N. Y., G. H. Lake, Ia., who later certified to their correctness.

LEGISLATIVE COMMITTEE

Report presented by Chairman Brown and read by Secretary Hall. This recited the efforts of Messrs. Pitkin, Rouse, Dayton, Meehan, Hoopes and others to checkmate the apparently assiduous efforts of United States entomologist Howard to secure legislation controlling the importation of foreign nursery stock. On the part of the entomologist there appeared to be a somewhat pronounced tendency to overlook the influence of prejudicial legislation upon the nursery business. The proposed bill was sidetracked and is not likely to be again brought forward during the present session. The confidence of the nurserymen in the ability

It was pointed out that the best advertising was that which created business. The nurseryman should see to it that no large surplus of good stock goes to the brush pile each year. Demand could be strengthened by judicious efforts in the line of more efficient publicity work.

These suggestions were immediately adopted by the convention, which voted to place the sum of \$500.00 at the disposal of the Committee to promote a campaign during the coming year.

NATIONAL COUNCIL OF HORTICULTURE

Col. Watrous in reporting on the desirability of contributing to this Central Horticultural Publicity Bureau did not believe that the benefits to the nurserymen were likely to be large. His recommendation, therefore, was adverse and the Association will, in accordance with movement



Complimentary Ride Thru Denver's Parks. Commodore Weber Shouting "All Aboard"

of the official entomologists to draft an equitable and practical inspection act has been severely shaken by an examination of the provisions of the bill presented by the Washington authorities some months ago, which would have now been in force but for the determined stand of the men composing this committee acquainted with trade necessities.

TRANSPORTATION COMMITTEE

The report presented by Chairman W. P. Stark dealt with the striking and important problems of the shipper. It was a splendid illustration of the possibilities of diplomatic consideration of delicate questions. The report which was highly complimented on the floor of the convention appears elsewhere.

PUBLICITY COMMITTEE

A FIELD FOR PUBLICITY WORK

A verbal report was presented by Chairman John Craig who called attention to the real possibilities and functions of this committee, provided its members were given some latitude and also some means whereby they could carry on an efficient campaign. This view was strongly supported by J. M. Irvine in presenting a paper on a Publicity Campaign.

recorded above, attempt an independent publicity campaign in future.

IMPORTANT PAPERS

There was certainly more solid subject matter presented at this convention than during any meeting in recent years. President Stannard, assisted by Chairman Hill of the Program Committee, kept the mill grinding steadily and the extensive grist was completely ground out at 4:00 P. M., on Thursday. Among the thoughtful papers of general inspirational character were those by John B. Morey, of Dansville, N. Y.—"The Part Nurserymen Have Taken in the Growth and Development of the Nation;" "Magnifying our Craft"—E. W. Kirkpatrick, Texas; "Cooperation between Nurserymen and Fruit Growers" W. L. Howard; "Should a Young Man Choose the Nursery Business for a Vocation"—A. Willis; "Herbaceous Plants"—C. S. Harrison of Nebraska. Mr. Harrison's paper was at once a plea for fuller appreciation of the æsthetics of plant culture and a hearty pæan of thanksgiving for the blessings of a luxuriant and beautiful flora available to nearly all parts of the country. The message was delivered with a vigor and sincerity which carried conviction.

ON THE PRACTICAL SIDE

The subject of prime interest to the grower of nursery stock related to root gall, root knot, hairy root, etc. of the apple. The stringent laws of some of the states against



Being Entertained in Denver. C. S. Harrison the Peony, Phlox and Iris Enthusiast in Back Seat. 79 Years "Young"

admission of stock affected by any sort of root enlargements or warts have driven nurserymen into action, and experiments have been inaugurated by them tending to throw light upon the "knotty" problem. Peter Youngers (Youngers & Company, Geneva, Nebr.), exhibited a fifteen year old tree root with attached stem which when planted was badly affected with root knots. The roots were now healthy and free from knots. The tree had made good growth, and moreover had borne good crops.

E. A. Smith (Jewell Nursery Company, Lake City, Minn.) recited interesting results of a similar demonstration undertaken by his Company five years ago which confirmed Mr. Youngers' findings in a comprehensive and convincing manner. This experience was further corroborated by Marshall Bros., of Nebraska, M. J. Wragg of Iowa, and others. The nurserymen are now disposed to question the justice of the enforcement of root knot laws with reference to the apple. It is time that the findings of pathologists who have been studying the biology of these troubles now published something for the benefit of the trade interested, if they have proceeded beyond the point of mere speculation. The Resolutions bearing upon this question appear elsewhere.

In the papers by Professors Gillette and Taylor of Colorado strong points were made in favor of inspection. (1) That our chief injurious orchard insects had been imported; (2) That in many of the newly developed or developing sections there were no fruit pests at the present time and would not be until they were introduced, hence the extreme anxiety of inspector and the orchardist to anticipate later difficulty by keeping out infested nursery stock. The upshot of the discussion brought home the conviction to the nurserymen that the best policy would be to meet the situation by furnishing the goods required, "making the purchaser pay the price."

A thoughtful paper treating the economic aspects of the nursery business by a young member of the craft, W. H. Stark, assistant treasurer of Stark Bros. Company, was highly commended. The "replacement evil" was ably

handled by J. W. Mayhew and resulted in the passing of a resolution condemning the practice. E. S. Osborne, (the only Eddie) of Rochester, urged the reduction of the number of varieties catalogued by nurserymen as a desirable step in the interest of both fruit grower and plant grower. Certain it is that sectional fruit lists to include standard varieties could be agreed upon, and this would be an excellent step, for it is evident that lists for the Mississippi Valley, New England and New York must continue to differ.

ST. LOUIS NEXT

Although in the corridors there was a good deal of talk of Boston as the next place of meeting, the Vice-Presidents reported solidly in favor of St. Louis. The report was adopted without question. So it is the Middle West next year. St. Louis ought to bring out a record breaking attendance.

THE OFFICERS ELECTED

Secretary Maloy submitted on behalf of the Vice-President the following report: President, W. P. Stark, Missouri; Vice-President, E. S. Welch, Iowa; Secretary, John Hall, New York; Treasurer, C. L. Yates, New York; Executive Committee, J. H. Dayton, Ohio; E. M. Sherman, Louisiana; H. B. Chase, Alabama. The nominations were promptly confirmed and the slate elected.

THAT SPECIAL CAR

Sunday morning, June fifth, the day set aside for the departure of the Eastern nurserymen for the annual pilgrimage, was one of copious wetness. Rochester who for thirty days had been regaling her citizens with daily showers could not break with her old habits and send a few hours of sunshine. In cars, automobiles and hacks the nurserymen were conveyed to the special car waiting at the New York Central station. As usual it was a merry crowd that found itself in the Pullman each one trying to occupy a whole seat and give his neighbor none.

Sir William Pitkin was there with his rough, gruff voice to bid fond adieu to his brother nurserymen and with him C. J. Brown. Both of these gentlemen found it impossible to go to Denver this year.

The inmates of this year's special car were: Messrs. A. Hoopes and Achelis, West Chester, Pa.; C. A. Tom, J. E. Ilgenfritz, of Monroe, Mich.; Orlando Harrison, Berlin, Md.; Harlan P. Kelsey, Salem, Mass.; H. B. Hooker, C. L. Yates, Frank Falls, Sec. John Hall, C. J. Maloy, M. B. Fox, E. S. Osborne, Thomas Brown, Mr. Vredenburg and wife, Rochester, N. Y.; C. A. Bennett, Robbinsville, N. J.; G. S. Josselyn, Fredonia, N. Y.; C. R. Burr, Manchester, Conn.; John B. Morey, Dansville, N. Y.; J. H. Dayton, Painesville, O.; T. B. Meehan, Dreshertown, Pa.; W. J. Maloney, Dansville, N. Y.; James McHutchison, New York City.

MR. DARROW SAILS.

H. Frank Darrow, importer of plants, seeds, bulbs, etc., 26 Barclay Street, New York, will sail for Europe July 7th, per S.S. La Provence, on a short business trip.

ADDRESS OF PRESIDENT F. H. STANNARD

Thirty-fifth Annual Meeting American Association of Nurserymen.

We are very fortunate indeed this year to be meeting under the blue skies of Colorado and in sight of her mountains whose grandeur is a constant source of inspiration. When we view them, there comes to us contempt for all that is petty and narrow, and an admiration and veneration for all that is great and enduring.

These meetings are held each year for the purpose of building up a great industry all over this continent; by conferring with each other, exchanging experiences, discussing new methods, and making plans to overcome the various difficulties and obstacles to success in the nursery business. As we have so little time at these annual meetings, much of the work of this association must be accomplished by committees, whose members give their time and attention to this work during the entire year.

LEGISLATION

The Committee on Legislation, of which Mr. Charles J. Brown, is chairman, especially deserves our gratitude this year, for its constant vigilance in preventing unwise legislation at Washington. Most of us are in favor of a national inspection law, which would bring about uniformity in the handling of inter-state shipments, but, as our lawmakers are not nurserymen, and many of them have little or no knowledge of the existing conditions, there is, all the time, the danger of a law being passed, that would not better conditions, but would very likely work a hardship on all interested in the growing or handling of trees. Mr. William Pitkin, a member of the Legislative Committee, has had many years' experience in legislative work and has spent considerable time at Washington during the present session of Congress, and much credit is due him for preventing a very unwise measure.

TRANSPORTATION

The work of the Transportation Committee, under the able leadership of Mr. W. P. Stark, also deserves special mention. This matter of transportation is very important to nurserymen and must be watched constantly to prevent the railway companies from making new rules and regulations that would raise rates or handicap our shipping. Another point, more important, possibly, than raising of rates or changing of regulations, is the matter of securing better and more prompt service. **DELAYS IN SHIPPING ARE COSTING THE NURSERYMEN THOUSANDS OF DOLLARS EVERY YEAR.** For instance, it often takes twice as long for a local shipment to go from the central West to the north Pacific Coast, as for local shipments to come from European points to the central West. These apparently unnecessary delays make our business with each other extremely hazardous, if they do not prohibit it altogether.

I would recommend that the Association provide a fund to pay the expenses of a representative to look after our

interests at Washington, and also, to pay the expenses of a representative to attend the meetings of the railway classification committees, when anything is on the docket pertaining to the nursery business. Many of us were much surprised, when the new tariff was published, to find that the duty was materially raised on apple and other seeds in which nurserymen were interested, while flower seeds were practically free. It is well known that foreign apple and mahaleb seeds are better than the home grown product, which really makes it necessary to import these seeds, and every effort should be made to have this duty on seeds reduced when the tariff question is again under consideration. For this reason, I would recommend that a fund also be provided for a representative from the tariff committee to watch our interests.

PROGRAM, ENTERTAINMENT, EXHIBITS

Our Program Committee and Committees on Entertainment and Exhibits have all done excellent work and the success of this meeting is due largely to these three committees.

I would like to thank the members of the various committees of this association, publicly, for their faithful and efficient work during the past year.

CO-OPERATION

At our meeting in Rochester, last year, Mr. J. H. Dayton, of Painesville, Ohio, read a paper on "Nurserymen Pulling Together a Little More," which I believe was much appreciated by every nurseryman present, not only because of the entertaining way in which he handled the subject, but because of the facts presented, which we all recognize, and ought to make a special effort to put in practice. Much has been done in recent years in establishing uniform grades, and, to furnish the grades now required by the trade, and discard the objectionable trees, as required by the various state laws, makes the producer furnish more real value for the money than at any other period in the history of the nursery business. For these reasons, there ought to be a united effort on the part of the nurserymen to get better prices.

Since our last meeting, our old friend, Mr. George C. Seager, has found it necessary to sever his connection with this Association, and I believe all join with me in expressing our sincere regret. Mr. Seager has been secretary for over twenty years, and not only knew the nurserymen, and always had their interests in mind, but is a genial, upright, whole-souled gentleman, and will be greatly missed.

SPEECHES AT CONVENTION

During the next few months the NATIONAL NURSERYMAN will publish most of the speeches delivered before the annual convention at Denver.

The National Nurseryman

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AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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AMERICAN ASSOCIATION OF NURSERYMEN.

President—W. P. Stark, Louisiana, Mo.; vice president, E. S. Welch, Shenandoah, Iowa; secretary, John Hall, Rochester, N. Y.; treasurer, C. L. Yates, Rochester, N. Y.
Executive Committee—J. H. Dayton, Painesville, O.; E. M. Sherman, Charles City, Ia.; H. B. Chase, Huntsville, Ala.
Transportation—W. P. Stark, Louisiana, Mo.
Tariff—Irving Rouse, Rochester, N. Y.
Legislation—Chas. J. Brown, Rochester, N. Y.
Co-operation with Entomologists—Orlando Harrison, Berlin, Md.
Program—J. W. Hill, Des Moines, Iowa
Publicity—John Craig, Ithaca, N. Y.
Exhibits—E. P. Bernardin, Parsons, Kans.
Arrangements—John Hall, Rochester, N. Y.
Editing Report—John Hall, Rochester, N. Y.
Entertainment—Frank A. Weber, Nursery, Mo.
Forestry—C. M. Hobbs, Bridgeport, Ind.
National Council of Horticulture—C. L. Watrous, Des Moines, Iowa.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckmans, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.
American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.
Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.
Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.
Connecticut Nurserymen's Association—President, John S. Barnes, Yaleville; secretary, Frank E. Conine, Stratford.
Eastern Association of Nurserymen—President, W. C. Barry, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.
National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.
National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O. secretary, W. B. Cole, Painesville, O.
Pacific Coast Association of Nurserymen—President, C. Malmo, Seattle, Wash.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.
Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, R C Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secectary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

THE NEW EXECUTIVE

Of course we are speaking of the American Association of Nurserymen. In electing Mr. W. P. Stark, treasurer of the Stark Bros. Nurseries and Orchards Co., Louisiana, Mo., the Association has followed its custom of promoting the vice-president. In this ease the promotion is fitting and well earned. Mr. Stark has been earnest as a worker in the Association, and as an individual in furthering nursery interests and elevating the ideals of the craft. His report as chairman of the Transportation Committee was one of the best the Assoeiation has received. He is liberal, progressive and a man of ideas. His residence in the zone of next year's meeting plaece will undoubtedly make for the suceess of the 1911 Convention. The NATIONAL NURSERYMAN wishes Mr. Stark and the Assoeiation a suceessful year.

WESTERN HOSPITALITY

The members of the American Association of Nurserymen have had an exeellent opportunity of sampling Western Hospitality qualitatively and quantitatively. In both respees it measured up to a very high standard. When the men from the Missouri River and westward said, "Come over to Denver," they realized their obligations; and that they knew full well what sueh an invitation involved was abundantly demonstrated by the generous way in which they aeted the parts of hosts at the reeent meeting.

Those who know, realize that such entertainment in the way of drives, theatre parties, and extensive sightseeing tours, means not merely thoughtful supervision and foresight but it means what is much more potent—good hard eash and a liberal supply. The Western men did not shy at this necessity but came to the seratch in a whole hearted way. For this they deserve, as were heartily aecorded, the warm thanks of their visiting brethren. But don't make the pace too hot! Some well meaning sections may not feel able to come into the raece, much as they would like to.

CREATING BUSINESS

The art of advertising has come to be a business by itself. It is one thing to grow stoek. It is quite another thing to sell stoek. The kind of advertising that pays is the kind which develops a spirit of euriosity on the part of the possible buyer. If interest is not aroused the ad has failed in its mission. Among the many good papers presented at the Denver Convention, none was worthy of more eareful consideration than the points along this line brought forward by J. M. Irvine under the head of Publicity Campaigns. The pith of Mr. Irvine's paper rested on the assumption that a demand for any kind of ware could be produced by a publicity campaign judiciously conducted: He instanced the "long erop" of cherry trees last spring and stated that this over-stoek might have been much redued by the right kind of advertising at the proper time. Of course this means that eoöperation and concerted action must replaece desultory individual move-ments. It is in line with this idea that we hope the new committee on publicity will proceed during the coming

year. It goes without saying that they will need to be in the confidence of the nurserymen if they are to render the most efficient service.

THAT ROOT KNOT QUESTION

The next innings on this sub-surface problem belongs to the scientists. The nurserymen have been "producing the goods" by showing examples of apple trees badly infested with root galls when planted, now in healthy growing, still more, productive condition. Nurserymen's experiments have shown that galls or root knots on apples tend to disappear in Minnesota and Nebraska when the trees are set in orchard. This is good as far as it goes, anyhow. It was a matter of considerable disappointment that the United States pathologist of the Bureau of Plant Industry had nothing to offer on the subject, though it had been rumored before the meeting that certain important discoveries in the life history of the causal agent were about to be announced. The nurserymen need the information at the earliest moment and nothing but the necessity of carrying the investigation to a satisfactory stage of completeness should delay the publication of the result. Later we shall present Mr. Hedgecock's report recently received.—EDITOR.

SEVENTY-FIFTH ANNIVERSARY

This month August Rölker & Sons celebrate the seventy-fifth year of their establishment as a firm of Importers and Exporters of Horticultural Goods. At present two sons of August Rölker who died in 1871 shortly after the present style of firm was formed, carry on the business at 31 Barclay Street. Winfried Roelker and Joseph E. Rölker are the active members.

August Rölker, the founder came to America in 1835 and engaged at once in the importing business as it related to horticultural products. It was sometime in July, 1835, that he started in business taking offices on Platt Street. His first unpleasant experience was the great fire of 1835 which destroyed a great number of business houses in New York, among them his own. However, the insurance company that covered his risks proved solvent so that after all the fire amounted only to a clean sale.

In the course of years, August Rölker entered into several partnerships, the most important being that known as A. Rölker & Möllman. This partnership lasted until the death of Mr. Möllman in 1860. In 1871, the present style of firm was formed by taking into partnership his two oldest sons, August Rölker, Jr., and Winfried Roelker. Soon after arranging this partnership and three days before it was to take effect, August Rölker died but his will provided for the continuance of the present style of firm. Two younger brothers were admitted in later years.

At present only Winfried and Joseph remain to carry on the business established by August Rölker seventy-five years ago under his own name. The firm is well known, either in a business way or by reputation, to most nurserymen of the country and we are sure they will join with us in wishing the Rölkers all success and happiness in the years to come.

IT PAYS

"Our space with you has been a paying proposition for us." Arcadia Nurseries, Monticello, Fla.

VALDESIAN NURSERIES, BOSTIC, N. C.

So far we have had a fine growing season, occasional showers, with everything starting off nicely. Many inquiries for quotations have come from all over the country and the indications are now that we will do a bigger fall business than ever before.

NINETY-SIX PERCENT.

Of the 356 Nurserymen whose names appear in the 1910 Badge Book, ninety-six per cent. (96%) are subscribers to the NATIONAL NURSERYMAN. Doesn't this give you an inkling of how we cover the nursery field? We reach all the Nurserymen of America who are worth reaching and if you have any business message for them you will come to us.

Obituary

THE WORK OF J. L. NORMAND

Fruit culture and especially scientific plant breeding has lost a most valuable man in the death of J. L. Normand of Marksville, La. Without scientific training but with an inborn love of plants, Mr. Normand worked along original and distinct lines in the creation of new types of fruits, paying little attention to the commercial side, until he won a recognition among men who realize the value of such work. He lived and worked in a region where his achievements were little appreciated because they were little known and understood, content to live among his own creations in the plant world, studying them and caring for them as his own children.

Mr. Normand's most notable work in recent years was the development of the "Carnegie orange," a true hybrid, remarkable in its frost resistant powers, which he obtained by crossing the common Louisiana Sweet orange with the citrus trifoliata. The creation of a new type by hybridization, to preserve the edible qualities of the orange and the hardy qualities of the stock was a great achievement. Along this line the national department of agriculture has worked for many years, developing a number of types, none of which are equal to the Carnegie of Mr. Normand.

Another line of valuable work in which Mr. Normand was also successful was the testing of figs. He found a type that has, in addition to size, saccharine matter and general qualities, remarkable keeping and shipping qualities. This "New French Fig," as he named it, he selected as the most desirable after testing some seventy varieties.

He also developed a new type of ornamental, an umbrella shrubbery, a distinct and beautiful type. Pears and many other fruits received his attention and study, and he made some distinct crosses with apples and developed some fruits unlike any types in existence. The original lines along which he worked attracted the notice of students of plant breeding all over the United States.

DEATH OF AN APPLE KING

Conrad Schopp, president of the Conrad Schopp Fruit Company, St. Louis, known as "The Apple King," is dead. He came to St. Louis forty years ago from Germany and started at once in the produce business. From a small beginning he developed into the largest operator in fruit in the country and was the first man in the West to invade the markets of Europe with apples.—*American Fruits.*

ECHOES OF THE CONVENTION

ROOT GALL OF THE APPLE

This subject excited the most lively discussion indulged in at any time during the Convention. The state inspectors were badly "scotched" by some growers, while the sentiment that uninfested regions should be protected was defended by others. The experiments reported do not give much ground for basing the theory that the hard knot or hairy root of the apple seriously affect the vigor or productivity of the tree.

C. S. Harrison and E. W. Kirkpatrick are strongly of the opinion that some of the inspectors are in dire need of inspection themselves.

The Exhibits while smaller than usual, for reasons given by Mr. Bernardin, were very instructive. The tree displays of the J. G. Harrison's Company of Berlin, Md., was comprehensive and attractive. H. M. Simpson & Sons and W. C. Reed of Vincennes, Ind., showed their usual fine line of cherry stock, and they report that the promise of this spring is most heartening. The Benjamin Chase Co., of Derry, N. H., was on hand with its usual extensive display of labels, as were the Dayton Fruit Tree Label Co., of Ohio. The lithographing and printing firms added much to the attractiveness of the display by their handsome catalog covers and fine photographs.

EUROPEAN NURSERIES

The illustrated lecture on European nurseries by Professor Craig on Wednesday night interested a large audience, and was followed by moving pictures depicting fruit growing and fighting frost in the orchards of the western slope of Colorado.

Frank J. Weber and J. W. Hill were the chief engineers of the meeting and proved their efficiency as directors of entertainment and program affairs.

Among the veterans in attendance were: J. Van Lindley, Pomona, N. C.; C. L. Watrous, Des Moines, Ia.; W. S. Coe, F. E. Atkinson, Wis.; Geo. S. Josselyn, Fredonia, N. Y.; John C. Chase, Derry, N. H.; Ilgenfritz Bros., Monroe, Mich. The faces of Messrs. Pitkin, Brown and Rouse were missed from the gathering.

The exhibit of the McFarland organizations, Harrisburg, Pa., was principally devoted to a showing of the selling

literature produced during the year by The McFarland Publicity Service. An interesting feature of this exhibit was a collection of letters from the firms for whom the material shown had been made, giving the results it had produced.

The Moffat trip attracted two hundred passengers, who were united in claiming it to be the most wonderful scenic route of the world. This railroad has the distinction of going higher than any other standard guage line in the world. Then it is something to go skywards two miles and a half by any means. Thanks to the hosts were gracefully returned by J. Horace McFarland.

The all day trip around the "Horn," including stops at Loveland, Boulder, Greeley and the State Agricultural College at Ft. Collins, was taken by something over two hun-

dred of the nurserymen and their friends. This tour gave easterners an excellent notion of fruit and farm crops and methods employed in growing them in irrigated districts.

That the men from the East, North and South are not inappreciative of the generous hospitality of their Western brethren was evidenced by the hearty manner in which they seconded the movement to give tangible expression to their feelings by present-

ing some form of testimonial to Frank Weber and the Western Association of Nurserymen. Certainly these men, assisted by the Denver Convention League and the Denver Immigration Association, deserve a large measure of praise and commendation.

NURSERYMEN TRAVELLING

Many of the eastern men who attended the Convention seized the opportunity to see something of the West before returning to their homes. Harlan P. Kelsey, Salem, Mass., Charles J. Maloy, Rochester, N. Y., Eddie Osborne, Rochester, N. Y., went to the coast, returning by northern routes. The western slope of the Colorado mountains attracted J. McHutchison, New York, who has orchard interests in that region; Geo. Hooker, Rochester, N. Y.; L. A. Berckmans, Augusta, Ga.; Messrs. Kelly, Maloney and John Morey of Dansville, N. Y.; Wickersham, Baltimore, and others intent on spying out this new land of apparently great horticultural promise. Among the veterans on the western jaunt was Mr. Abner Hoopes of Hoopes Bros. & Thomas, West Chester, Pa., who entered with all of the vim of a youngster into the activities of each day.



Nursery Stock on Exhibition—A Deal in Progress in the Right Hand Corner

REPORT OF EXHIBITS COMMITTEE

E. P. BERNARDIN, Chairman

Mr. President and Members of the American Association of Nurserymen:

I herewith present to you my report as Chairman of the committee on Exhibits. We were somewhat handicapped this year on account of lack of space, owing to the fact that it was impossible to secure a room reasonably close to our meeting place for the exhibition of heavy implements and machinery of any kind. This part of the exhibit has always been quite a feature at our former meetings and is sadly missed at this one. The following presents a list of the exhibitors and a brief outline of what each exhibited, and are given in order of application for space:

The Fruit Grower, St. Joseph, Mo. Copies of *Fruit Grower*, Catalogues and other printed matter.

Texas Nursery Co., Sherman, Texas. Ripe Fruits consisting of Peaches and Plums.

Dayton Fruit Tree Label Co., Dayton, Ohio. Plain, printed and wired labels.

Jackson & Perkins Co., Newark, N. Y. Tree Hydrangea, Roses, Clematis, etc.

THE NATIONAL NURSERYMAN Pub. Co., Rochester, N. Y. Sample Copies NATIONAL NURSERYMAN and Souvenir pamphlets.

American Fruits Pub. Co., Rochester, N. Y. Sample Copies of *American Fruits*.

H. M. Simpson & Sons, Vincennes, Ind., Cherry Trees.

J. G. Harrison & Sons, Berlin, Md. Fruit and Ornamental trees.

W. C. Reed, Vincennes, Ind. Cherry trees.

The Palisade Fruit & Land Co., Palisade, Colo. Samples of ripe cherries and nursery stock.

T. V. Munson & Son, Denison, Texas. Sample copies of book, "Foundations of American Grape Culture" with circulars pertaining to same.

The Benjamin Chase Co., Derry Village, N. H. Wooden tree and pot labels.

Vredenburg & Co., Rochester, N. Y. Fruit plates and other nursery supplies.

Southern Fruit Grower, Chattanooga, Tenn. Sample copies of *Southern Fruit Grower*.

The McFarland Organizations, Harrisburg, Pa. Advertising matter consisting of catalogues, booklets, mailing cards, photographs, etc.

Rochester Lithographing Co., Rochester, N. Y. Colored plates, plate books, etc.

B. G. Pratt Co., New York City, N. Y. Scalecide and sulfocide in bottles.

Nathan R. Graves, Rochester, N. Y. Photographs for reproduction in nursery catalogues.

Thos. Meehan & Sons Inc., Dresher, Montgomery Co., Pa. Red Star Brand Raffia, colored raffia, and handy calipers.

Chase Nursery Co., Huntsville, Ala. Hand tools, counting machines and nursery supplies.

J. F. Rosenfield, West Point, Neb. Collection of Peony blooms.

Stecher Lithographic Co., Rochester, N. Y. Lithograph plates.

The Ohio Nursery & Supply Co., Elyria, Ohio. Paper tree labels.

C. S. Harrison, York, Neb. Books on the Peony, Phlox, Iris and etc., also blooms of Peony and Iris.

Harrison Nursery Co., York, Neb. Sample bundle of Norway poplar.

Carroll R. Tiffany, Franklin Forks, Pa. Grafting knife, tree pruner and weeding forks.

The Deming Co., Salem, Ohio. Hand spray pumps of various kinds and appliances.

G. V. Cederborg, Denver, Colo. Frost Alarm.

The Intermountain Fruit Journal, Grand Junction, Colo. Copies of the *Intermountain Fruit Journal*.

McHutchison & Co., 17 Murray St., New York. Samples of raffia.

A. B. Morse Co., St. Joseph, Mich. Samples of printing for nurserymen.

Frank H. Wild Floral Co., Sarcoxie, Mo. Pæonia bloom of choice kinds.

Marshall Bros., Arlington, Neb. Root knot specimens.

M. W. Ayer & Sons, Philadelphia, Pa. Advertising literature.

George C. Roeding, Fresno, Cal. Book entitled, "The Smyrna Fig;" also samples Capri, and Calismyrna figs and Burbank's spineless cactus.

Thomas A. Macbeth, Springfield, Ohio. Small plants of evergreens, shrubs, etc.

The Field and Farm, Denver, Colo. Sample copies of their paper.

W. E. Galeener & Sons, Vienna, Ill. Peach seed.

Waxahachie Nursery Co., Waxahachie, Texas. Cherry trees.

Grand Junction & Palisade Chambers of Commerce, Grand Junction and Palisade, Colo. Cherry, plum, apple, apricot and peach limbs with fruit.

M. G. Black, Mt. Pleasant, Texas. Trees of various sorts.



Literature and Flowers Exhibited

REPORT OF THE TRANSPORTATION COMMITTEE OF THE AMERICAN ASSOCIATION OF NURSERYMEN FOR THE YEAR, 1909-10

W. P. STARK, Chairman

Mr. Chairman and men of the Association:

In submitting the following report of work accomplished by your Transportation Committee during the past twelve months, I do so feeling that every member of the Association will be gratified at the showing. Speaking broadly, this year's effort on the part of the Transportation Committee shows more tangible results than in the past. This, I attribute not only to the hearty co-operation of the members of the Committee itself, but of the Association as a body.

The principal items of interest to the Association will be found in the report of results accomplished at the Western Classification Meeting at Charlevoix, Michigan and at San Antonio, Texas; of reductions in rates to Pacific Coast intermediate points; of a notice to nurserymen regarding the threat of railroads to raise rates if claims for lost or damaged shipments are presented in excess of \$5.00 per cwt.; of work with the Official, Uniform, and Illinois Commissioners classifications, and of work done in cultivating the acquaintance of railroad men.

CHARLEVOIX MEETING

At the meeting of the Western Classification Committee held at Charlevoix, Mich., in July last, the Transportation Committee was represented by Mr. Charles Sizemore, Traffic Manager of Stark Bros., of Louisiana, Mo. There was nothing on the docket of direct interest to nurserymen other than Rule 8, Page 3 of the Western Classification, which effects the minimum on shipments loaded in refrigerator cars, which when more than one car and not enough for two cars, the part lot takes the local rate. (This would not effect nurserymen except those west of the Mississippi River). Since imported seedlings are received during the winter months when refrigerator cars are necessary, it was asked that this rule be changed so that the excess of one or more cars would go at the car rate, with the result that the Western Trunk Line Committee advised that they would arrange to have the tariff so corrected that the part lot could go at the car rate, which would be satisfactory to interested parties.

While at Charlevoix, Mr. Sizemore also took up the question of rates on west bound nursery stock of less than car load lots with the result that effective December 6, 1909, new tariffs were issued showing the same rates on west bound nursery stock as on east bound, which made a saving to the nurserymen, varying from 20c to \$1.15 per cwt., and more in a few cases.

SAN ANTONIO MEETING

Mr. W. C. Reed of Vincennes, Indiana and Mr. Sizemore attended the meeting of the Western Classification Committee held at San Antonio, Texas, in January. While the docket of this meeting contained nothing of interest to the nurserymen, it was felt that the presence of the two representatives was highly profitable to the Association, because of the resulting extension of friendships and the widening of acquaintances among the railroad men.

\$5.00 VALUATION CLAUSE

At the request of the American Association of Nurserymen, the \$5.00 valuation clause refreight claims was eliminated from the Western Classification at their January meeting in Mobile. Since then it has developed that a number of claims were presented to railroads which showed, in many cases, a valuation running as high as \$20.00 per cwt. It is suggested that all claims for lost shipments be entered on a very reasonable basis. As failure to do so may bring on the threatened advance in rates.

PREPAYMENTS

Rule 16-B of the Official Classification provides that nursery stock on which prepayment is required, may be forwarded on the guarantee of the consignor that freight and charges will be paid at destination. Very few railroad agents appear to be familiar with this rule and it continually happens that shipments from nurserymen are held up at Chicago, East St. Louis, or other junction points on account of charges not being prepaid. This point we took up with Chairman Holbrook of the Official Classification, who requested dates of shipments which had been held up and then went vigorously after the roads, calling their attention to Rule 16-B. It seems that Mr. Holbrook's work was thorough for since that time none of our shipments have been held up and we presume other nurserymen have likewise felt the same pleasing result of this work.

AGITATING A NEW RATE ON DORMANT ROSES

In response to complaints from eastern nurserymen on paying the same rating on imported roses as on plants, they claiming that dormant roses should be classified the same as shrubbery, we took the matter up with Chairman Holbrook, but our efforts were in vain. Mr. Holbrook stated that if the nurserymen insisted that the shrubbery rating should also apply on dormant roses, they would be compelled to advance the rating on all lines of shrubbery. The next meeting of the Official Classification will be held sometime in August, and suggest that if the nurserymen interested desire this subject taken up at that meeting, that we will have some of our railroad friends place it on the docket.

UNIFORM CLASSIFICATION

We have been in constant touch with the Uniform Classification Committee during the past twelve months. Matters of general interest to nurserymen have been gone over and discussed in detail with two members of the committee who seemed disposed to grant the nurserymen anything in reason. They were of the opinion that the three cent value now required by the Southern Classification is unnecessary and we do not believe it will be incorporated in the Uniform Classification. A uniform rating on bales, that will be satisfactory to the nurserymen, will be secured.

CARLOAD MINIMUMS

One of the most important features under the subject of Uniform Classification is that of minimum weights. Mr. Elmer H. Wood, of the Uniform Classification Committee, believes that a minimum based on the cubic feet area instead

of on the car length, as at present, will be more satisfactory and more equitable to the nurserymen. Mr. Wood, who is also a member of the Western Classification Committee, has consented to a further discussion of this very important subject at the next meeting of the Western Classification which will be held at Glenwood Springs, Colorado, early in July of this year. It is highly important that the Association of Nurserymen should have one or more representatives at this Glenwood meeting. The question of minimum weights is of such vital importance to all that we can not allow this opportunity to further discuss it with Mr. Wood and possibly settle it with the Western Classification Committee to slip by. It is our belief that we will experience no trouble in securing a 14,000 or 15,000 lb. minimum on small cars and a correspondingly low minimum on larger cars on the cubic foot basis.

For the nurserymen to realize how minimums figured on the cubic foot basis will effect their pocket books, a series of figures are necessary, and I have brought with me a supply of printed sheets containing these figures and asked the Chairman to distribute the sheets among all members.

DELAYED SHIPMENTS

This is a subject of constant worry and annoyance to all nurserymen and yet it is the opinion of this Committee that it is a trouble which must be solved by the individual rather than through the Association or the Transportation Committee. It is our belief that this is more of a local question than one for the Association to handle, especially since such troubles have their beginning during the nurserymen's rush seasons. The members of the Transportation Committee, while eager and willing to do everything in their power to solve transportation matters for members of the Association would find it impossible to look after the details of each member's traffic department, and therefore does not seem feasible to us for the Transportation Committee to attempt to handle this problem for the entire Association.

SUGGESTION FOR TRACING SHIPMENTS

Personally, our plan has always been to diligently trace all shipments, and especially the larger ones. This we do through the General Freight Departments instead of through the local agents, and by routing all shipments through to destination, we have practically eliminated the delay difficulty. Our office records show that 98% of all shipments leaving our packing houses go through ahead of schedule time. It is not necessary to furnish way-bill reference on car load shipments, but on local shipments, better results are secured if it can be shown, although not absolutely necessary.

FORCING HIGHER RATES

Care must be taken by the nurserymen in their agitation of transportation matters. Some of our fellow nurserymen have suggested they would be willing to pay higher freight rates in order to get shipments through to their destination in quicker time. It is the opinion of this Committee that higher rates would in no way effect the time service rendered by the railroads, for delays find their source in other depart-

ments of railroad operation. Practically all the railroads of the country bill nursery stock and trees on what is known as a "red-bill," which signifies goods of a perishable nature and which must be rushed through. We again suggest that exceeding caution be exercised in the agitation of matters of this character since we are all familiar with the fact that railroads find occasion to raise rates often enough without suggestions from their shippers that they do so.

THE PERSONAL FACTOR IN TRANSPORTATION MATTERS

In our brief account of the San Antonio meeting of the Western Classification Committee, we dropped a suggestion as to the importance of cultivating the acquaintance and extending our friendships among railroad men. We believe every member of the American Association of Nurserymen will agree with us that we can spend both time and money advantageously in the cultivation of those men of authority in the Traffic departments of our railroads who can, and will, and do exercise their power and influence in the settlement of questions which so vitally effect us. Experience has conclusively proven that it is much easier to confer with and secure concessions from those with whom we are acquainted.

SUMMARY

The foregoing, we believe, covers in a practical way the more important results of the past season's work on the part of the Transportation Committee. There is, however, much to be done in the future but with the same kindly consideration and co-operation from every member of the Association, such as we have experienced during the past year, we feel that the work can be accomplished.

TREASURER'S REPORT

The detailed report of the Treasurer of the American Association of Nurserymen will be published in the August issue. Lack of space prevents its appearance this month.

Doings of Societies

THE AMERICAN GLADIOLUS SOCIETY

The American Gladiolus Society was launched at Boston, May 27th, 1910, with seventy-five charter members at its christening. Great enthusiasm was manifest from beginning to end. This Society is to be congratulated on the strong and representative body of officers it has selected for its first year's work.

An invitation has been extended to the new society to meet with the Society of American florists at its annual exhibition at Rochester N. Y., in August. The Department of Horticulture of Cornell University, Ithaca, N. Y., has tendered to them the use of its trial grounds for the growing and testing of varieties of gladioli.

CANADIAN NATIONAL APPLE SHOW

The British Columbia government has declined to make a grant to the first Canadian National Apple Show that it was proposed to hold in Vancouver next November. \$10,000 was asked for from the British Columbia government, and a similar amount from the Dominion government. The city of Vancouver had pledged \$6,000. This means that there is little probability that the show will be held this year.

The Pacific Coast Association of Nurserymen will hold its annual meeting at Walla-Walla, Wash., July 13th.

RESOLUTIONS ADOPTED BY THE THIRTY-FIFTH ANNUAL CONVENTION OF THE AMERICAN ASSOCIATION OF NURSERYMEN

To Regulate Trade Rates and the Cutting of Prices

Moved by J. H. Dayton, Ohio.

RESOLVED, That our lowest prices or trade lists should be mailed only to nurserymen or dealers with established headquarters who are known to be actively engaged in the trade;

That some effort should be made to have our price lists and quotations to orchardists and retail buyers nearer a uniform basis for same grades and varieties of stock;

That as the practice of cutting prices as the season advances is one of the great demoralizers of both the wholesale and retail trade, established rates should be adhered to throughout the season;

That parks, cemeteries, and other public institutions are not in the trade and are not entitled to trade rates;

That stock shipped on orders of landscape architects and invoiced direct to their customers should be billed at same retail rates as if order came direct from the planter.

Regarding Apple Root Gall or Hairy Root of the Apple

By E. F. Smith, Minnesota.

WHEREAS, The hard or hairy form of root or crown gall, by practical experiments has not been found injurious to or contagious in apple trees,

Therefore be it Resolved, That we, The National Association of Nurserymen of America, do hereby protest against and condemn the action of state legislatures in refusing to grant certificates of admission and acceptance of apple trees in their respective states because of the presence of hard or hairy form of root or crown gall, and we hereby urge upon the legislatures, their agents, or persons having this matter in charge, the advisability of admitting this class of stock, and recommend that the laws be so changed as to permit the delivery of apples trees showing hard or hairy form of root or crown gall;

Also, that this resolution be placed in the hands of our Legislative Committee with power to act at their discretion.

Regarding Replacement Policy

WHEREAS, the policy of replacing nursery stock at less than full value, heretofore extensively practiced over the country generally, has resulted in serious injury to the nurserymen, exercised a demoralizing influence over the salesmen, and has not really benefited the planter because it has encouraged negligence on his part in planting and looking after trees and plants purchased by him and led him to underestimate the value of such nursery stock sold him; and

WHEREAS, this Association was instituted and is maintained to promote the best interests of both nurserymen and planter, which said interests are being seriously crippled by the above policy; and

WHEREAS, said practice necessarily tends to destroy the confidence of the planter in the nurseryman, and produces in his mind an erroneous impression as to the real value of the goods sold by the nurseryman;

Therefore be it resolved, That this Association unqualifiedly condemn the said policy of replacing nursery stock at less than its full market value as being unwise, unbusiness-like and wholly unnecessary, and

Be it further resolved, That the real interests of the nurseryman and planter will be best promoted by the exercise of sound business methods in this, as well as other dealings, with them.

Thanks to Hosts.

RESOLVED, That the American Association of Nurserymen extend its heartiest thanks and sincere appreciation to the following organizations of Denver and locality for the generous and efficient manner in which they have contributed to the success and interest of this our annual Convention.

We wish specially to recognize the Denver Convention League, The Colorado State Board of Immigration and the Civic Interests represented by His Honor Mayor Spears and his colleagues. The memory of this visit will remain among the pleasantest in our experience.

Your committee desire to record their appreciation of the helpful manner in which those invited to provide papers and addresses for the Convention have responded. These papers addresses and illustrated lectures have been extremely instructive and valuable. To those who are not nurserymen and who have contributed to our instruction and entertainment we are particularly grateful.

RESOLVED, Further, that Mr. Frank A. Weber, Chairman of our Entertainment Committee, Mr. A. W. Ferguson, Mr. and Mrs. Root, Mr. and Mrs. Valentine and Mr. and Mrs. Fravert of this city, who have so unselfishly devoted their entire time in contributing to our happiness and pleasure while their guests, be tendered a vote of thanks for their courtesy.

We assure these gentlemen that we shall ever hold in pleasant memory the thirty-fifth annual Convention of this Association.

J. W. HILL,
HERBERT CHASE,
J. H. SKINNER.

In Memoriam.

Since the last annual meeting of this Association, the Grim Reaper has invaded the ranks of our membership, and has removed from us, two members of our organization whose presence we greatly miss upon this occasion.

We recall with kindest feelings of appreciation the valuable services cheerfully rendered upon former occasions, by Judge Eugene Stark of Louisiana, Mo., and Mr. Ed Seager of Rochester, N. Y., and in their removal from our midst we feel that this Association has suffered an irreparable loss and it is hereby

RESOLVED, That the sincere sympathy of this Association be extended the Stark Bros., Mr. and Mrs. George C. Seager and other relations and friends of these estimable

men, in their bereavement, and for lasting solace and comfort we commend them to "Him who doeth all things well."

Respectfully submitted,

J. W. HILL,
J. H. SKINNER,
HERBERT CHASE.

Denver, Col., June 9, '10.

Tribute to George C. Seager.

Recalling with deep appreciation the twenty years service rendered by Mr. George C. Seager, as Secretary of this Association and greatly missing his genial presence and helpful counsel as well as the happy greeting and pleasant personality of his estimable wife at this meeting,

BE IT RESOLVED, That the American Association of Nurserymen in Convention assembled, do hereby express its high appreciation of the excellent service rendered by Mr. Seager during his long term in office and deeply regret that he felt it his duty to himself and his business to tender his resignation.

We further express to him and his devoted wife our sincere sympathy in the loss of his brother, Mr. Ed. Seager, who has for many years been his efficient assistant and assure them that they will always occupy a warm place in the memories of the membership of this Association, who wish for them many long and happy years of helpful usefulness among their friends.

RESOLVED, That the above be made a part of the records of this meeting, and that a copy of the same be mailed to Mr. Seager.

J. W. HILL,
J. H. SKINNER,
HERBERT CHASE.

Denver, Col., June 9, '10.

NURSERYMEN ATTENDING DENVER CONVENTION

C. C. Abel & Co., New York, N. Y.; N. W. Ayer & Son, Chicago, Ills.; H. J. Backes, Humphrey, Neb.; Baker Bros. Co. Inc., Fort Worth, Texas; C. A. Bennett, Robbinsville, N. J.; P. J. Berckmans Co., Augusta, Ga.; E. P. Bernardin, Parsons, Kan.; Sam E. Blair, Nutley, N. J.; A. Bryant & Son, Princeton, Ills.; A. J. Brown, Geneva, Neb.; C. R. Burr & Co., Manchester, Conn.; Andree L. Causse, New York, N. Y.; Charlton Nursery Co., Rochester, N. Y.; The Benj. Chase Co., Derry Village, N. H.; Chase Nursery Co., Huntsville, Ala.; Clinton Falls Nursery Co., Owatonna, Minn.; Coe, Converse & Edwards Co., Fort Atkinson, Wis.; Custer Bros., Normal, Ills.; Davis Co. Nurseries, Roy, Utah; Franklin Davis Nursery Co., Baltimore, Md.; Dayton Fruit Tree Label Co., Dayton, Ohio; The Deming Co., Salem, Ohio; Des Moines Nursery Co., Des Moines, Ia.; L. F. Dintelman, Belleville, Ills.; E. W. Dunham, Baroda, Mich.; Ellwanger & Barry, Rochester, N. Y.; Elmhurst Landscape & Nursery Co., Kansas City, Mo.; Miles Estep, Bethany, Mo.; F. & F. Nurseries, Springfield, N. J.; Francher Creek Nurseries, Fresno, Calif.; Farmers Nursery Co., Troy, Ohio; B. E. Fields & Son, Fremont, Neb.; Foster & Griffith, Fredonia, N. Y. (Mr. Griffith and Wife); W. E. Galeener & Sons, Vienna, Ills.; Gateway Nurseries, LeMars, Ia.; W. T. Gough & Co., Abilene, Kans.; Grand View Nursery & Or. Co., Des Moines, Ia.; Nathan R. Graves, Rochester, N. Y.; Greening Nursery Co., Monroe, Mich.; J. W. Griesemer, Hopedale, Ills.; W. M. Grisinger, Sale Lake City, Utah; A. Hamilton & Sons, Bangor, Mich.; J. G. Harrison & Sons, Berlin, Md.; Harrison Nursery Co., York, Neb.; Hawks Nursery Co., Rochester, N. Y.; Geo. A. Hawley, Hart, Mich.; J. K. Henby & Sons, Greenfield, Ind.; J. W. Hinshaw, Eureka, Kans.; C. M. Hobbs & Sons, Bridgeport, Ind.; Holsinger Bros., Rosedale, Kan.; C. M. Hooker & Sons, Rochester, N. Y.; Hooker, Wyman & Co., Rochester, N. Y.; Hoopes Bro. & Thomas, West Chester, Pa.; T. S. Hubbard Co., Fredonia, N. Y.; C. A. Ilgenfritz, Monroe, Mich.; I. E. Ilgenfritz & Sons Co., Monroe, Mich.; Jackson & Perkins Co., Newark, N. Y.; Jewell Nursery Co., Lake City, Minn.; Geo. S. Josselyn, Fredonia, N. Y.; Kansas City Nurseries, Kansas City, Mo.; Kelley Bros., Dansville, N. Y.; Kelsey Nurseries, St. Joseph, Mo.; Harlan P. Kelsey, Salem, Mass.; Knoxville Nursery Co., Knoxville, Tenn.; J. F. LeClare, Rochester, N. Y.; J. Van Lindley Nursery Co., Pomona, N. C.; J. A. Lopeman, Enid, Okla.; Maloney Bros. & Wells, Dansville, N. Y.; Marshall Bros., Arlington, Neb.; Maywood Nursery, Maywood, Ill.; Thos. A. McBeth, Springfield, Ohio.; J. H. McFarland Co., Harrisburg, Pa.; McFarland Publicity Service, Harrisburg, Pa.; McHutchison & Co., New York, N. Y.; G. D. McKisson, Fairmont, Minn.; W. E. McMurray, Hamilton,

Mont.; C. W. McNair, Dansville, N. Y.; Thos. Meehan & Sons, Dresher, Pa.; F. W. Meneray, Council Bluffs, Ia.; A. Miller & Sons, Milton, Ore.; Montana Nursery Co., Billings, Mont.; Morey & Son, Dansville, N. Y.; A. B. Morse & Co., St. Joseph, Mich.; T. V. Munson & Co., Denison, Texas; New Haven Nurseries, New Haven, Mo.; Northern Nursery Co., Denver, Col.; N. Jersey Nurseries, Newark, N. J.; Oregon Nurseries, Salem, Ore.; Jim Parker, Tecumseh, Okla.; Chas. M. Peters, Salisbury, Md.; J. B. Pilkington, Portland, Ore.; Prudential Nursery Co., Kalamazoo, Mich.; W. C. Reed, Vincennes, Ind.; Rochester Lithographing Co., Rochester, N. Y.; W. H. Roeder, Osceola, Mo.; August Rolker & Sons, 31 Barclay St., New York; C. R. Root, Denver, Col.; Saddler Bros., Bloomington, Ills.; F. E. Schifferli, Fredonia, N. Y.; Sherman Nursery Co., Charles City, Ia.; Shenandoah Nurseries, Shenandoah, Ia.; H. M. Simpson & Sons, Vincennes, Ind.; J. H. Skinner & Co., Topeka, Kans.; Carl Sonderegger, Beatrice, Neb.; So. St. Louis Nurseries, St. Louis, Mo.; Southern Nursery Co., Winchester, Tenn.; Southwestern Nursery Co., Okemah, Okla.; F. H. Stannard & Co., Ottawa, Kan.; Stecher Lithographing Co., Rochester, N. Y.; Storrs & Harrison Co., Painesville, O.; J. H. Dayton; H. S. Taylor & Co., Rochester, N. Y. (Wife); Tenn. Wholesale Nurseries, Winchester, Tenn.; Jacob Uhl, Dansville, N. Y.; Utah Nursery Co., Inc., Salt Lake City, Utah; Valdesian Nurseries, Bostic, N. C.; F. B. Vandegrift & Co., New York, N. Y.; Vine Hill Nursery Co., Mt. Pleasant, Texas; Vredenburg & Co., Rochester, N. Y. (wife); Washington Nursery Co., Toppenish, Wash.; C. L. Watrous, Des Moines, Ia.; The E. L. Watrous Nurseries, Inc., Des Moines, Ia.; F. W. Watson & Co., Topeka, Kan.; Waxahachie Nursery Co., Waxahachie, Texas; H. J. Weber Nursery Co., Nursery, Mo.; F. A. Weber; E. S. Welch, Shenandoah, Ia.; G. L. Welch & Co., Fremont, Neb.; Whiting Nursery Co., Yanktown, S. D.; Winfield Nursery Co., Winfield, Kan.; Wolverine Co-operative Nursery Co., Ltd., Paw Paw, Mich.; Allen L. Wood, Rochester, N. Y.; Wragg Nursery Co., Des Moines, Ia.; Xenia Star Nurseries, Xenia, Ohio; Peter Younger, Geneva, Neb.; Professor John Craig, Ithaca, N. Y.; C. L. Yates, Rochester, N. Y.; Stark Bros. Nurseries, Louisiana, Mo.; W. P. Stark.

MEMBERS OF THE AMERICAN ASSOCIATION OF NURSERYMEN AND THEIR FRIENDS WHO ENJOYED THE MOFFAT TRIP

IOWA—August Steffen, Mrs. August Steffen, A. Jaacks, D. Erickson, Mrs. L. R. Scott, Henry Kemp, T. P. Scott, Peter Koch, Remsen.

OHIO—George H. Marsh, Van Wert; Mr. F. S. Meacham, Cincinnati; Mrs. S. S. Allen, Bainbridge.

MICHIGAN—Lizzie Bezemer, Minnie Bierens, Carrie Loots, Kalamazoo.

NEBRASKA—Jas. Fitzgerald, Elm Creek; E. Stackhouse, Omaha.

PENNSYLVANIA—Geo. M. Shelmira, Philadelphia; Karl Louchs, Scranton.

KANSAS—H. P. Ikenberry, Mrs. H. P. Ikenberry, Quinter.

ILLINOIS—Wm. F. Bobzien, Mrs. Wm. F. Bobzien, Chicago.

MISSOURI—M. T. Comer, St. Louis; Tracy F. Brown, Clinton.

NEW HAMPSHIRE—James Shields, Mrs. E. F. Shields, Hanover.

TENNESSEE—K. K. Williamson, Mrs. E. D. Williamson, Memphis.

WEST VIRGINIA—C. L. Gaskins, J. E. Travis, Fairmount.

TEXAS—Samuel J. Shoultz, Amarillo; J. L. Jones, Paris.

NORTH CAROLINA—Arthur Roscower, Goldsboro.

KANSAS—S. E. Griesa, L. Carnes, Orin Hinshaw, J. W. Hinshaw, W. T. Gough, Emil A. Anderson, W. S. Griesa, Alice E. Skinner, J. H. Skinner, Elizabeth Anderson, Nell S. Skinner, Geo. M. Skinner, Mrs. Geo. M. Skinner, M. W. Gough, Gertrude Verna Gough, Mrs. W. T. Gough, Mr. and Mrs. E. R. Taylor, R. I. Lemon, E. P. Bernardin, C. E. McParlan and wife, F. W. Watson and wife, A. Willis, I. VanLindley, Mrs. Gertrude Holsinger, M. E. Chandler, Mrs. M. E. Chandler, Mrs. A. Willis.

MISSOURI—W. J. Howard, W. G. Campbell, W. H. Toedhr, R. J. Bagley, Miles Estep, E. M. Wilson, W. H. Stark, James M. Irvine, J. W. Schuelle, Robert F. Schuette, Miss Tillie S. Crow, Edith J. Schuette, Mrs. J. W. Schuette, Mrs. Minnie Steele, Cora Schuette, Mrs. S. N. Cox, Charles Work, William P. Stark.

IOWA—F. W. Welch, A. F. Lake, F. W. Meneroy, Earl D. Needham, W. H. Green, C. L. Watrous, J. W. Hill, Mr. and Mrs. J. W. Wragg, Miss Gertrude Welch, Mr. and Mrs. J. E. Case, Mrs. A. F. Lake, J. H. Wallace, Mr. and Mrs. E. F. Edmondson, Mr. and Mrs. E. S. Welch, Mr. and Mrs. Wm. L. Bechtle, Bertha Day.

ILLINOIS—Guy A. Bryant, L. F. Dintelman, J. W. Griesemer, Z. C. Smith, Frank B. White, Mr. and Mrs. Geo. W. Winters, Miss Emma Jacobson, Frank Custer and wife, Wm. Saddler and wife, W. E. Galcener and wife, Mrs. Z. C. Smith.

NEBRASKA—Fred Londeregger, H. R. Kinsey, A. C. Marshall, M. Pangle, Peter Younger, W. A. Harrison, Leslie Marshall, Nellie Younger, Mrs. M. Pangle, Mrs. W. A. Harrison, Mr. and Mrs. H. W. Marshall, Mr. and Mrs. G. S. Christy, Mr. and Mrs. H. S. Harrison, Mr. and Mrs. G. L. Welch, Mr. and Mrs. A. J. Brown, C. S. Harrison,

Mrs. P. Younger, Miss Angela Herbes, Miss Clara Herbes, Mr. and Mrs. H. J. Backes, Laura I. Backes, Margaret Billerback.

COLORADO—N. Q. Tanquary, Mr. and Mrs. Geo. W. Loomis, Ella Joyce, Mona E. Fravert, Mrs. Walter Andrew, Olive Fravert, A. M. Ferguson, B. F. Bonnewell, and wife Mrs. C. C. Chapman, Arthur F. Grubs, L. H. Allen, Mrs. Carrie Dyer, Mrs. S. Chapman, H. A. Barnes, Mrs. R. McDonald, Mr. and Mrs. Jas. H. Hogg, Alice Barnes, Edwin Krick, D. D., Mrs. C. G. Ferguson, Mrs. J. A. Valentine, B. E. Ayres, Mrs. H. Scherer, Mable Diehl, Mrs. J. H. Myers, E. A. Smith, Mrs. S. Morris, T. W. Page, J. A. Valentine, Miss Woodie Dake, Miss Nellie C. Brown, Denver. Milton N. Bergheim, Boulder. Guy Knox, C. H. Smith, Dr. N. A. Cramer, C. P. Gillette, Mrs. R. I. Lensen, E. P. Taylor, Mrs. A. I. Akin, H. A. Gooch and wife, Louis Jenet, W. G. Sutherland.

NEW YORK—W. J. Maloney, C. L. Yates, J. B. Morey, J. W. Hutchinson, W. L. Hart, Chas. Cannon, Chas. J. Maloy, John Watson, N. W. Uhl, H. Hooker, M. B. Fox, C. H. Perkins, Nathan R. Graves, James F. LeClare, E. E. Schiffleri, James Kelly, E. S. Osborne, Thos. F. Brown, Allen L. Wood and wife, John Hall, Georgianna Wood, Sarah L. Perry, Mr. and Mrs. P. H. Dougherty, Mr. and Mrs. Chas. W. Vredenburg, Mr. and Mrs. H. S. Taylor, Mr. and Mrs. C. Wilson McNair, Mr. and Mrs. R. Griffith.

INDIANA—Harry D. Simpson, R. A. Wickersham, R. A. Simpson, W. C. Reed and wife, Miss Annie H. Peters, Mrs. R. A. Simpson, Ada Morse Reed, Mrs. C. M. Hobbs, Carrie Hobbs, C. M. Hobbs, Mr. and Mrs. E. A. Henby.

OHIO—J. H. Dayton, T. J. Dinsmore and wife, M. A. Gaines and wife, T. B. West, R. C. Stoehr and wife, Ferris C. Myers, Thos. A. McBeth, W. N. Scarff and wife.

MICHIGAN—Mrs. Geo. A. Hawley, E. W. Dunham, Jesse J. Dunham, Harry E. Hamilton, T. E. Ilgenfritz, W. F. Ilgenfritz, Charles A. Ilgenfritz, O. W. Richardson, A. B. Moore, Geo. A. Hawley, G. E. Prater, Jr., Mrs. G. E. Prater.

PENNSYLVANIA—Abner Hooper, Thos. B. Meehan, O. P. Beckley, George Aehelis, Jefferson Thomas and wife, J. Horace McFarland and wife.

OKLAHOMA—J. A. Lopeman, C. M. Rethmond, Mr. and Mrs. James Parker, J. W. Tetrick.

NEW JERSEY—Carl H. Flemer, E. D. Pannell, Samuel E. Blair, Mr. and Mrs. W. W. Rich, C. A. Bennett.

TEXAS—J. L. Downing, M. G. Black, E. W. Kirkpatrick, Will B. Munson, Jno. S. Kerr, J. L. Baker and wife, Mrs. T. V. Munson.

UTAH—M. E. Callahan, E. J. Harness, P. A. Dix, Julia M. Dix, W. M. Grisinger, M. Sowles.

WISCONSIN—F. L. Ilgenfritz, R. J. Coe, T. J. Ferguson, H. A. Myers, F. N. Ferguson.

MARYLAND—Orlando Harrison, Joseph Davis, Chas. M. Peters.

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SOUTH DAKOTA—George H. Whiting, Eva E. Whiting, S. M. Bishop.

ALABAMA—Henry B. Chase, R. G. Chase, George I. Wahlmark.

IDAHO—Chas. T. Hakes, O. F. Smith.

MONTANA—D. J. Tighe, W. E. McMurry.

MASSACHUSETTS—Harlan P. Kelsey, Geo. C. Reed.

CALIFORNIA—George C. Roeding, Fresno.

NEW HAMPSHIRE—John C. Chase, Derry.

NORTH DAKOTA—John W. Maher, Devils Lake.

OREGON—S. A. Miller, Milton.

GEORGIA—L. A. Berckmans, Augusta.

MINNESOTA—G. D. McKisson, Fairmount; M. R. Cashman, Owatonna.

FOREIGN—H. Femand, Angers, France.

BOY DIES FROM INJURIES RESULT OF AUTO ACCIDENT

Scott Walker, the 10-year-old boy who was seriously hurt by an automobile during the National Nurserymen's parade which took place Saturday noon, died of his injuries at Sutherland's hospital this morning at 5 o'clock. No hope has been held by the doctors for his recovery from the very first. The lungs and chest were badly crushed and the tissue of the abdomen torn by the wheels of the automobile passing over him. Considering the weight of the car and passengers, it is remarkable that he lived for 36 hours.

No definite plans have been made for the funeral, but it is thought that it may be held Wednesday afternoon.

Word has been sent to friends in the east and they are awaiting their arrival.—*Loveland Daily Herald*.

NURSERYMEN GIVE AID TO INJURED BOY'S MOTHER

Because of the accident which resulted in the parade of Saturday, in which Scott Walker was knocked down and run over by an auto, crushing his chest and lungs and resulting in his death at 5 o'clock this morning at Sutherland's hospital, the members of the National Nurserymen's association offered a resolution on their way to Fort Collins on making up a purse to pay the expenses of doctor and hospital here. They secured \$135 from the members, who willingly gave toward this purse. It is needless to remark that this was a very generous thing for them to do and will be greatly appreciated by the mother of the boy. The following letter to the mayor was received this morning:

GREELEY, Colo., June 11, 1910.

Mayor of Loveland, Loveland, Colo.:

My dear Sir: Enclosed please find draft on First National bank of Denver for \$135, which you will please hand to the mother of the little boy who was injured by auto during the entertainment given by your citizens to the nurserymen this forenoon. Kindly acknowledge receipt and advise as to the name of the child and financial condition of the family. Any information you can give me will be greatly appreciated. Please express to the family the sympathy of the American Association of Nurserymen.

By J. W. HILL,

Chairman of Committee.

Address Des Moines, Iowa.—*Loveland Daily Herald*.

NURSERYMEN EXPRESS THEIR APPRECIATION

The American Association of Nurserymen, 400 strong, wish to express to the citizens of Loveland their appreciation of the courtesy extended them by the delightful auto ride afforded on this occasion and assure them of our sincere thanks for the pleasure given us.

We congratulate you upon the selection of this delightful spot as the location of your homes and feel that your beautiful little city is correctly named LOVELAND.

You certainly have one of the choicest and most beautiful spots of this delightful Colorado paradise and have the sincere wishes of the entire party for many more years of useful prosperity in this your western home.

We suggest that you use every effort to remain here just as long as you possibly can, or we seriously doubt that you will find the paradise above a more beautiful place in which to take up your permanent abode.

Yours truly,

PETER YOUNGER, Nebraska,

J. W. HILL, Iowa,

A. WILLIS, Kansas,

ALLEN WOOD, New York,

C. G. FERGUSON, Missouri.

Committee.

—*Loveland Daily Herald*.

INTRODUCTORY OFFER

THE NATIONAL NURSERYMAN will be sent for 16 months on receipt of \$1.00, the regular subscription price. Good for new subscribers only.

ROOT GALL OF THE APPLE

BY E. A. SMITH,

Vice-President of The Jewell Nursery Co., Lake City, Minn., June 1910

PRELUDE

History frequently destroys theories. Many of those which have been accepted and practiced are found worthless, while many of those which have been rejected have finally been accepted as the most practical and efficient. There are many chief corner stones now lying idle in vacant lots. In time, they will become the key stones of an arch, upon which will rest the progressive ideas of the future.

Nations have come and gone, animal and vegetable life is constantly changing, and with these changes have come new diseases, and new treatments of old diseases.

Valuable information has been gained and important discoveries made, relating to the habits and diseases of plant life, thru the United States Experimental Stations and other

apples, and is injurious, and great care should be taken in propagating, to not communicate the disease with knife or by contact with roots which are infected."

Prof. Hedgecock, now of the U. S. Experimental Department, Washington, states in his excellent paper given before the American Association of Nurserymen, that in 1905 in making piece grafts, he finds the best material for wrapping, to be the cheapest kind of calico, with which, only fourteen and nine-twelfths per cent. in his experiment showed Crown Gall. Waxed paper showed twenty-nine and four-tenths per cent. waxed thread showed thirty-six and three-tenths per cent. Crown Gall. He further says, experiments show that grafts planted in poorly drained, heavy, stiff soil, produce more Crown Gall than in loose and dry soil, and



Lined Up for a Picture

agencies. If their work is largely theoretical, it should be supplemented by the more practical work of others.

EXPERIMENTS OF OTHERS

Before approaching the practical side of this subject which has come under our direct observation, let us briefly quote from those who have made a study of Root or Crown Gall from a scientific, theoretical and to some extent, practical standpoint.

Prof. J. L. Phillips of the Experiment Station of Virginia, has paid considerable attention to Crown and Root Gall. His observation leads him to believe that the so-called disease can be transmitted by scions, and that scions should only be taken from healthy trees. He finds that some varieties are more susceptible to gall than others.

Prof. J. B. S. Norton, of the Maryland Experimental Station says: "It may be pretty certainly stated that the hard wood Gall near the stem and root of apple stock is not contagious, but that the soft Gall on peach, plum and raspberry is distinct from the hard wood Gall mentioned on

while soft Crown Gall may be slightly contagious, the hard Crown Gall has not been found so in his experiments. His conclusions, also at the end of two years' experimenting, indicate that hard Root Gall is not contagious. In an experiment with three hundred trees at the end of one year, the so-called diseased trees show no difference in appearance from the healthy trees, also experiments by the Department, show that from considerable data collected, the Gall does not greatly shorten the life of the young tree. He mentions an incident where fifty Root Gall trees were planted near Brussels, Ill., and at the end of eight years the orchard contained forty healthy, vigorous trees, also that the further north one goes, the less liability there is of finding what is called the soft Gall.

PARTIAL CAUSE OF ROOT GALL

Our observation in practical work, leads us to conclude that Root Gall is more prevalent in wet seasons than it is in dry seasons. Cut or injure the root of any tree or plant and

there will frequently be found, at the point of injury, a hard incrustation which is known as Root Gall. This we think is largely due to an excessive flow of sap in response to the mending processes of nature. The springtime will cause an increase of sap to flow and escape from this wound, and in nature's effort to heal it, or check the escape of the sap, a hard knotty incrustation is formed. Does Root Gall signify disease? Upon this point the horticultural doctors disagree. Even as wise a man as Solomon failed to leave a record, stating whether hard root Gall upon apple trees was more injurious to a tree than a wart is to a man's hand.

UNWISE AGITATION

Several years ago our attention was called to Root Gall through "scare" reports sent out in the papers and by others whom it appears had but little practical knowledge of the subject. As we had not observed any serious effects from the hard or hairy form of root gall, we paid little or no attention to the reports, until laws were passed in certain states prohibiting the admission of trees showing signs of any form of root gall whatever.

As we believe in finding out about these things for ourselves, and in practicing what we preach, we commenced a series of practical experiments, the results of which we hope will prove of value to nurserymen and planters in general.

THE JEWELL NURSERY EXPERIMENTS

This report relates only to the hard and hairy forms of Root Gall. We know nothing about the soft form of Root Gall upon apple trees, and have never experimented with it.

The record of these practical experiments begins with the spring of 1905, when the Jewell Nursery Company, of Lake City, Minn., planted several hundred apple trees which had the worst Root Gall upon them that could possibly be procured. The varieties planted were Okabena, Jewell's Winter, Patten's Greening, Duchess, Wealthy, Longfield, Hiberna, Lyman's Prolific crab and the Hiller crab. Some of the trees were planted at a depth of six inches; others twelve inches; others eighteen inches. Some were planted in soil that had not been previously prepared or fertilized; some in soil that had been fertilized with well rotted manure; also wood ashes, and some were treated anti-septically with a dry preparation consisting of one-half pound sulphate of iron, four pounds slaked lime, two pounds sodium chloride, one-half pound powdered Sulphur, and also by dipping in the same formula dissolved in 60 gallons of water.

There were also planted in with them, trees which had no root gall upon them for the purpose of comparing the growth and also to ascertain whether hard or hairy root gall was really contagious. Some of the trees were planted a foot apart in the row, others two feet apart; others three feet and the rows were six feet apart. The soil where the planting was done varied from clayey to sandy and gravelly. The ground sloped toward the north so the water could wash from one tree to another and thus produce contagion if such a condition could be brought about.

FIRST YEAR'S REPORT

The trees when originally planted were three years old,

FELIX and DYKHUIS BOSKOOP, HOLLAND ROSES

Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina

A Full Line of Hardy Nursery Stock
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WHY SPRAY AT ALL

When the work can be done much easier by applying LAFER INSECTICIDE on the soil around the tree, being absorbed by the roots inoculating the sap, the scale and insects will be destroyed. Free Pamphlet. Address

J. W. LAFER, Sta. B., R. F. D. No. 2, Box 2A.
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Notice to the Trade

Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

H. DEN OUDEN & SON

The Old Farm Nurseries

BOSKOOP, HOLLAND

PEONIES

Our lists of 100 choice varieties for 1910 have already been mailed; did you get your copy? If not, and if interested in peonies do not fail to send for one. No finer, more healthy stock to be obtained anywhere. Prices right.

J. F. ROSEFIELD, Peony Specialist
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GEO. H. JOHNSTON, Proprietor
(Successor to Blair & Kaufman)

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Offer for SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

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We now have in stock VIRGINIA NATURAL PEACH SEED crop 1908, can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,
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P. OUWERKERK,

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Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

ALL NURSERYMEN SHOULD BE INTERESTED IN COMMERCIAL FERTILIZERS

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WARE BROS. COMPANY,
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Publishers of The American Fertilizer Hand-Book

averaging three-fourths inch in diameter and six feet in height. November 10th, 1905, we dug 18 of these trees. A condensed report of that date reads as follows: "There seems to be but very little difference in the growth of the trees which had Root Gall upon them and those which had not. All the trees had a vigorous and healthy appearance. There was but little difference in the growth of any of the trees, which was from eight to twelve inches. The depth of planting and special treatment did not seem to affect them materially the first season. The Root Gall on most of the trees was one and one-half of two and one-half inches in diameter when the trees were dug." Photographs were taken of these trees before planting and of different specimens at the close of the season, showing the growth of the trees as well as the appearance of the Root Gall.

SECOND YEAR'S REPORT

In the fall of 1906, we dug 14 trees—Okabena, Patten's Greening, Lyman's Prolific and Wealthy. All these trees had root gall upon them when planted. We have reports on each individual tree, but as these will prove uninteresting in detail we will only present a summary. The Okabenas averaged a growth of twelve inches, trees thrifty and vigorous in every respect. The Patten's Greenings averaged a growth of twelve inches, trees thrifty and vigorous. The Lyman's Prolific averaged a growth of ten inches, trees thrifty and vigorous. The Wealthy averaged a growth of twelve inches, trees thrifty and vigorous.

THIRD YEAR'S REPORT

Report upon Root Gall trees Nov. 19th, 1907. There were dug three Patten's Greening, three Hiberna, five Wealthy, three Okabena, two Hiller crab and one Lyman's Prolific crab. The Okabena trees averaged a growth of twenty-one inches. The growth of the Hiberna trees averaged thirty inches. The growth of the Wealthy trees averaged twenty-four inches. In Patten's Greening, the average growth was fourteen inches. The Hiller crab twelve inches. In three of the Wealthy trees the Root Gall had practically disappeared. Of the three Patten's Greening only one showed signs of Root Gall, one showed signs of Black Heart. Of the two Hiller crabs, in one, the Root Gall had practically disappeared, one showed trace of Root Gall. Average height of all the trees, ten feet. Four of the trees when planted did not have Root Gall, and showed no signs of any when dug. These trees presented practically the same appearance as those which had Root Gall when planted. The one Lyman's Prolific crab dug at this time which had no Root Gall upon it when planted, showed no evidence of contagion; tree healthy. The report further states that in the Okabenas, two showed trace of Root Gall at point of graft; one showed signs of Root Gall at the tip of the roots; trees healthy. In the Hiberna, the Root Gall had practically disappeared.

FOURTH YEAR'S REPORT

November, 1908, the following number of trees and varieties were dug: six Wealthy, four Okabena, one Patten's Greening, two Jewell's Winter and two Hiberna. The

100,000 Apple. 1 yr, 4 to 5 ft. and 5 to 6 ft., for Fall 1910. We grow the finest 1 yr apple in the world. Figure with us.

A. L. LUKE, Wynnewood, Okla.

Waxahachie Nursery Company

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Growers of high grade Nursery Stock. Very large surplus for Fall 1910 and Spring 1911. Solicit a share of your patronage.

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ROSES TO LINE OUT

200 Standard and New Sorts
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Miners of High Grade Florida, Tennessee and South Carolina Phosphate; TENNESSEE RAW GROUND
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Growers of High Grade Nursery Stock.

We have to offer for Fall, 1910, and Spring, 1911, 100,000 fine Two Year Apple Trees, and 30,000 choice Three Year old Apple Trees; also, 90,000 Peach Trees. Standard Varieties. Prices reasonable. We solicit a share of your trade.

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BEVERLY, - - OHIO.

Amoor River Privet

by the thousand or carload. Also have in quantity California Privet, all sizes, Shade Trees, Silver, Sugar and Norway Maples, Sycamore and Carolina Poplars, Grape Vines, Cannas, Peonies, Etc. Prices right. Prompt and satisfactory services. Let us quote you on your wants before placing your order. It will pay you.

Valdesian Nurseries,

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BOSTIC, NORTH CAROLINA

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

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903 Tremont Bld., - - - Boston, Mass.

trees were from two to three inches in diameter, showing an average growth of two feet; the Root Gall continuing to show signs of disappearing, becoming a part of the root itself. The trees were vigorous and healthy, numerous fruit spurs appearing upon them, many of which bore apples. Those which were free from Root Gall when planted, were also free from it when dug. The trees, however, were not more vigorous or healthy in growth than the others. As a rule, the trees that were planted more than 14 inches deep did not do as well as those which were planted more shallow. In too deep planting, the tendency is for the end of the roots to grow upward. Some roots were actually found growing toward the surface. Those trees planted about 12 inches deep made the best growth and presented the best appearance. Too shallow planting, however, in the north, means short life to the tree, as the frost heaves the ground, and continually throws it toward the surface. The roots would thus be affected by freezing and thawing. An average planting of 12 inches deep in most soils is a safe guide.

FIFTH YEAR'S REPORT

In the fall of 1909, five years after planting, the total number of trees dug was 14—two Wealthy, two Duchess, two Longfield, two Okabena, two Hibernial, two Patten's Greening and two Northwestern Greening. As this is our last year's report to date, we give the record more in detail.

In the Wealthy trees, the Root Gall was absorbed and had disappeared, fine root system, diameter 3 to 3 1/2 inches, growth two to three feet, height fourteen feet.

Duchess: One tree had Root Gall when planted; one did not. No trace of Root Gall upon either of them. Appearance corresponds to the Wealthy.

Longfield: One tree had Root Gall when planted. This had disappeared. The other had no Root Gall when planted, but when dug there was a trace of it upon the small rootlets. Diameter of these trees about two inches, height ten feet.

Okabena: One tree had Root Gall when planted. Slight trace to be found only at the end of the roots, diameter three inches, height fifteen feet, fine tree. Second had no Root Gall when planted; no trace when dug. Description same as the preceding tree.

Hibernial: One tree had Root Gall when planted, which had practically disappeared. Diameter two and one-half inches, height ten feet, fine root system. Second tree had no Root Gall when planted, none when dug. Description corresponds to preceding tree.

Patten's Greening: One had Root Gall when planted, which shows an enlargement of the root as firm and solid as the root itself. Fine tree, diameter two and one-half inches, height fourteen feet. Second tree had no Root Gall when planted, none when dug. Description corresponds to preceding tree.

Northwestern Greening: One had Root Gall when planted; now entirely disappeared, fine root system, diameter of tree three inches, height fifteen feet, growth during the season two feet, fine tree. The second had no Root Gall when planted, slight trace on small rootlets when dug.

Stabilimento d'Orticoltura

FRATELLI SGARAVATTI,

Saonara (Padova) Italy.

ANNOUNCEMENT.—Desiring to enter into business relationship with several of the important Nurseries of North America, we request these Nurseries to send us their General Catalogues and to correspond with us.

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WANTED

A competent foreman who understands all field and inside work, budding, grafting, etc. Should have knowledge of all lines of work pertaining to the business and ability to handle men. Address "NEBRASKA," care of National Nurseryman.

WANTED

Young man with thorough ornamental nursery stock training. Splendid opening for right party. Must furnish the best of recommendation. Address

THE ELM CITY NURSERY CO., New Haven, Conn.

FOR SALE

An interest in a well established retail Nursery in the central west. Buyer must be reliable and competent to take active management and invest \$2000.00. Address "R" care National Nurseryman.

WANTED

A competent man to take charge of office. In replying state experience and salary wanted. We also have place for a few experienced nursery hands steady work and good wages.

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WANTED—BUDDERS

To begin about the first of July on peach. Good stand of seedlings and the best of wages paid. Address,

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Well equipped Nursery Plant with good, thriving retail business in the heart of Michigan Fruit belt. For particulars write "EQUIPPED" NATIONAL NURSERYMAN.

WANTED

Energetic young man as superintendent of a pecan orchard to be located at Jeanerette, Louisiana, must be experienced in nursery work, used to handling men, free from bad habits, perfectly reliable. State experience, give references, state wages wanted. Good opportunity.

STANDARD PECAN CO.

433 Unity Building,

BLOOMINGTON, ILL.

The description corresponding to the preceding tree.

The Root Gall upon a number of these trees dropped off when dug, resembling a dead root, hard, hollow and round; while the main root of the tree appeared fresh and healthy.

Nearly all these trees with the exception of the Longfield bore apples in the spring of 1909, in spite of the fact that they were closely crowded in the row. All of them had fruit spurs.

CONCLUSIONS

Up to this time the different treatments given the trees thru special fertilization does not appear to have affected them to any noticeable extent. The conclusion at the end of the five years planting is, that Root Gall has not affected the health, vigor or growth of the trees, that hard or hairy Root Gall is not contagious, that the tendency of this class of Root Gall is to become absorbed by the tree until it disappears entirely.

TREES MARKETING

These trees were in such good condition in the fall of 1909 that parties seeing them desired to purchase. We sold one hundred and fifty of these trees at \$5.00 each, net to us. In the spring of 1909, we set out some of these trees in our orchard and along the road side, and most of them bore fruit the same season. In the spring of 1910, the trees were all in good condition, those unsold, blossomed and would have borne fruit, had it not been for the severe freeze of April 23d.

It has been stated that the Duchess and Wealthy trees are more subject to Root Gall than other varieties. If so, it is a splendid testimonial to the benefit these trees derive from Root Gall, for they are two of the most hardy, prolific and long-lived varieties known to the northern planter.

FOREST TREES

Hard Root Gall is frequently found upon the roots of White Birch, Silver Poplar, Golden Willow, and even upon trees of considerable size dug from the forest. It also forms upon several varieties of shrubs, but so far as we have been able to observe without injury to any of them.

APPLE SEEDLINGS

In 1905, we procured and set out some apple seedlings upon which Root Gall was very noticeable. A year later, we top worked these, and they were dug in the fall of 1907. The roots then showed but very little Gall, it either having been absorbed thru becoming a part of the root itself, or was in the process of disappearing altogether.

LET OTHERS EXPERIMENT

In view of the fact that farm and other journals have published "scare" articles, and that certain states have prohibited the importation of trees having any trace of Root Gall, threatening to destroy whole shipments if more than five per cent of the trees show trace of it, is it not time for all growers of nursery stock to protect their interests by doing practical work in experimenting with trees infected with Root or Crown Gall, making the results of these experiments more generally known?

Compass Cherry Buds in Quantity

Amoor River Privet and Silver Leaf Poplar Cuttings

L. H. SMITH, Nurseryman
COUNCIL BLUFFS, IOWA

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ESTABLISHED 43 YEARS

We offer for Fall and Spring trade a large and complete stock of one and two year old GRAPE VINES in strong grades for nurserymen and dealers trade.

We also have an extra nice stock of one year CURRANTS. Send us your want list for prices.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

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Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of
ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES;
TWO YEAR CALIFORNIA PRIVET, CAROLINA
POPLARS, and CATALPA SPECIOSA.

WE INVITE YOUR INSPECTION.

Easterly Nursery Co.,

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Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS.

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,

Salt Lake City, Utah.

THE NURSERY A BUSINESS

One of the weak spots in the ranks of nurserymen is, that they do not experiment for themselves, but allow someone to do it for them, accepting the results without verification. Such a method among up-to-date men in other lines of business would not be tolerated. The nursery business must be treated as a business, in a business like way, or it will be a failure.

Root Gall is one of the many details of the nursery business which must receive practical attention. If the nurseryman is not sufficiently interested in this matter to give it his attention, then he should be the last man to complain because others are exacting and discriminate against him. We must accept restrictions and legislative conditions as they are, and not as we think they ought to be.

AN OPPORTUNITY

The Blue Lakes Nursery of Twin Falls, Idaho, is offering for sale for immediate delivery or at the end of the growing season, forty acres of first class nursery stock of the leading commercial varieties of apple, pear, peach, shade trees, etc. Stock is in fine condition. This is an excellent opportunity, the future prospects are exceedingly good as the spirit is high for making this one of the leading commercial orchard sections of the northwest. Object of sale to dissolve partnership. Write the nursery for particulars.

MANAGER WANTED

Wanted an experienced, industrious man, capable of managing the development of a large pecan plantation in South Georgia. Must be able to handle negro labor. Good opening for an active man.

Address Editor NATIONAL NURSERYMAN.

IS THERE A GOOD, LIVE, NURSERY FIRM

who can see into the future sufficiently to appreciate that the successful nursery business of the future is going to be in direct business? Does such a firm want to engage a high-class man who can organize and establish a paying business in direct orders.

The advertiser is a practical nurseryman thoroughly conversant with all phases of growing and selling Nursery Stock and has good business and executive ability.

"DIRECT SALES", Care of National Nurseryman

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Buy for the season 1910-11 Tree and Shrub Seeds of all American sorts. Please send your Wholesale Price-list before August 1.

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Grape and Currant Cuttings and Light
Grade of Vines for Lining Out
in Nursery Rows

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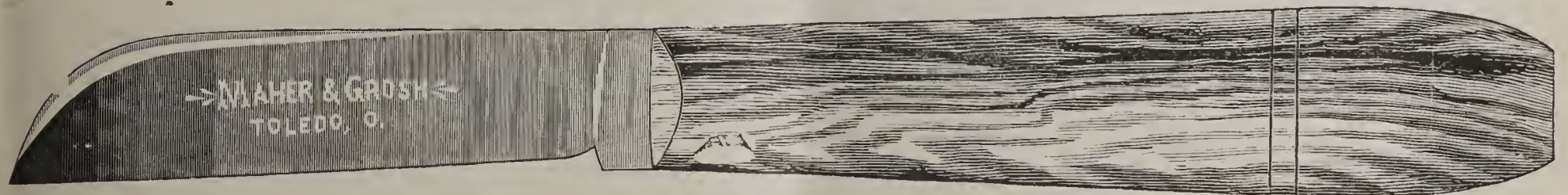
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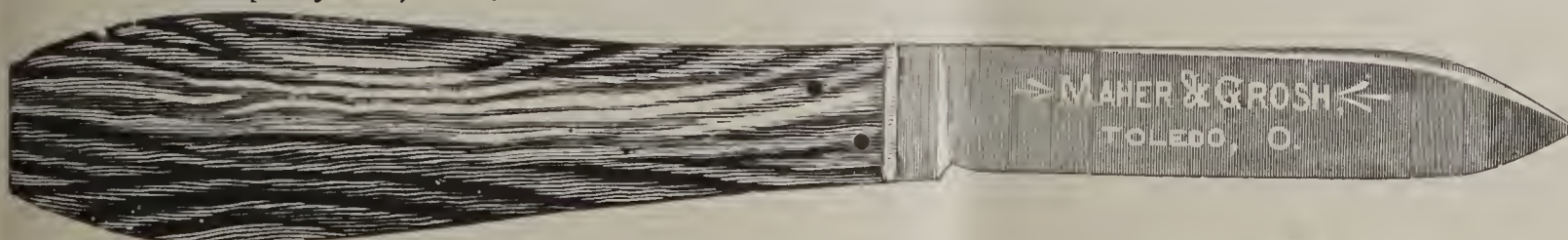
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∴ FLOWERING SHRUBS ∴
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Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

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Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

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FRUIT TREES in large quantities.

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THE STOCK IS IN EXCELLENT CONDITION
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Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
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Have full list of varieties for fall trade with special inducements for orders for late fall
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TREE BOX, 3 to 6 feet

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lars, Lindens and Texas
Umbrellas.

Strong field grown ROSES
Standard sorts, budded
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PLUM, Japan and English, good assortment of varieties

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ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

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Silver Maple, Am. Elm, C. L. W. Birch, all sizes
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Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

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Offer a General Line of Nursery Stock

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Our Native Plum are exceptionally fine

GRAPES, Small Fruits, Shrubs

And a large line of

Forest Tree Seedlings

A FINE LOT OF SHADE TREES

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Hardy Named Rhododendrons in such varieties as Everestianum, Caractacus, H. W. Sargent, C. S. Sargent, Kettle-drum, Chas. Dickens, Lady Armstrong, Atrosanguineum, Chas. Bagley, Alba elegans and grandiflora, Giganteum, Old Port, Fastuosum fl. plena, Roseum elegans, Delicatissima, Ed. S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the Parson's Hybrids.

Andromeda Floribunda, 20,000 to offer in bushy well grown plants 6 in. to 18 in.

Andromeda Japonica 6 to 18 in.

Azalea Mollis, seedlings from named varieties 4 to 24 in.

Ghent Azaleas, on own roots 12 to 24 in.

Azalea Pontica, the common yellow 12 to 30 in.

Gaultheria Shallon and Procumbens.

Kalmia Latifolia 6 to 30 inches.

Hybrid Tea, Tea, Polyantha and Hybrid Perpetual Roses, strong field-grown stock as Standards, Half Standards and Dwarfs in all leading varieties.

Copper Beech, selected seedling, specially good strain 3 to 9 ft.

Fruit Trees, trained, Espalier and Fan shaped.

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Retinospora Plumosa and Plumosa Aurea 6 in. to 6 ft.

Retinospora Pisifera and Pisifera Aurea 3 to 6 ft.

Retinospora Obtusa compacta 6 in. to 5 ft.

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FOR DELIVERY FALL 1910

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AUGUST ROLKER & SONS,

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Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and
SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Spring of 1910 in large quantities as usual:

SPECIALTIES

- PEARS—Bartlett and Beurre de Anjou, one year, in large supply. As fine in quality as ever grown.
PEARS—Kieffers, one and two years old. A much smaller crop than heretofore
PEARS—Assorted leading varieties. One and two yrs. old.
CHERRIES—On Mahaleb. Leading sour varieties. A large block but not as many as usual.
PEACHES—We excel in Peaches, and of these we will have as large and as fine a stock as we have ever grown, both in one year and June Buds.
PLUMS—A light stock of these for this year.
PECANS—We make a specialty of grafted Pecans. These are grown in our branch nurseries at Biloxi, Miss., where the conditions are very favorable for their propagation.
ROSES—Budded. We have discontinued the propagation of Roses at Biloxi. We will have a large stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.
PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.
MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Horseshoe Brand Bamboo Canes

Nurserymen who want a first class grade of Bamboo Canes will find the Horseshoe Brand the best to buy. Quotations on all sizes upon application. Orders should be placed six months in advance for quantities of long poles for staking trees, etc., in order to obtain proper deliveries.

Don't delay--write now.

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12 WEST BROADWAY, NEW YORK

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We are now booking orders for Fruit Seeds for delivery as soon as the crop is ready. All orders will be booked in the order they are received and filled accordingly, "First come, first served."

Will you be in the market this season for any MAHALEB or MAZZARD CHERRY, FRENCH CRAB APPLE, FRENCH PEAR or QUINCE SEED? If so, take our advice and place your order early. The supply of seed is rarely equal to the demand. It will pay you to get your order in early.

We are the largest collectors of Fruit Tree Seeds in this country and our seeds are always of first class germinating quality. None better. We supply the largest growers with their seeds and supply them regularly each year. To do this our seeds must prove their worth.

Write us at once stating your wants and we will answer you promptly giving the desired information.

We are also headquarters for Red Star Brand Raffia. Quality Guaranteed. The best grade of Raffia on the market for the money.

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B. & A. SPECIALTIES.

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WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.
ROSES, Hybrid Perpetual and Hybrid Tea varieties.
CONIFERS and EVERGREENS, 150 varieties.
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EVERGREEN SHRUBS, 35 varieties.
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JAPANESE MAPLES, 25 varieties.
ORNAMENTAL DECIDUOUS SHADE TREES, 50 varieties.
WEeping and STANDARD DECIDUOUS TREES, 50 varieties.
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HARDY VINES and CLIMBERS, 75 varieties.
PLANTS and TRAILING VINES, 12 varieties.
SPRING and SUMMER FLOWERING ROOTS and BULBS, 250 varieties.
DECORATIVE and FLOWERING PLANTS, 50 varieties.
TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries Pears, Apples, etc.
SMALL FRUITS, 75 varieties.
NEW and RARE TREES, SHRUBS and EVERGREENS, 35 varieties.
MISCELLANEOUS NEW and RARE PLANTS and VINES, 25 varieties.
HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.
NEW and RARE CHOICE HARDY PERENNIALS, 65 varieties.
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NURSERYMEN AND FLORISTS,
RUTHERFORD, N. J.

FRANS VAN DER BOM

THE HORTICULTURAL AGENCY, Oudenbosch, Holland.

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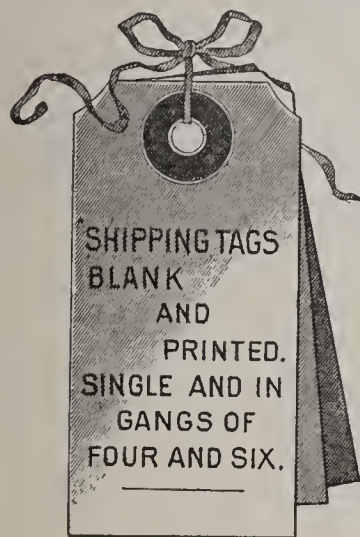
Andromeda	Dracaena	Manetti
Araucaria	Evergreens	Norway Maple
Areca	Flowering Shrubs	Ornamental trees
Aspidistra	Forest Trees	Paeonies
Azalea (Hardy)	French ornamentals	Planes
Azalea indica	Fruit stocks	Phoenix
Bay trees	Hollies	Rhododendron (Hardy)
Beech, purple	Hortensia	Rhododendron (Parsons)
Buxus	Hydrangea	Roses, dwarf
Chestnuts	Japanese Maple	Roses, tree
Clematis	Kalmia	Roses, new varieties
Climbers	Kentia	Schwedler Maples
Cocos	Koster's Blue Spruce	Spiraea
Convallaria	Latania	Thorns
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printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

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WE offer the trade, in car lots f. o. b. **Huntsville, Ala., 75,000 2-yr. cherry, Alabama grown, made up of the following varieties:**

Black Tartarian	Dyehouse
Montmorencies	Napoleon
Early Richmond	Suda
Ger. Ostheimer	Windsor
Governor Wood	Wragg

also extra fine 1-yr. and 2-yr. cherry Louisiana and Dansville grown. Special price on car-lots.

Quotations will be promptly submitted on application. Quick action is suggested.

Stark Bro's Nurseries & Orchards Co.

General Nurserymen

Louisiana, Missouri U. S. A.

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Price and specimen pages on request.

W. F. Humphrey

GENEVA, NEW YORK



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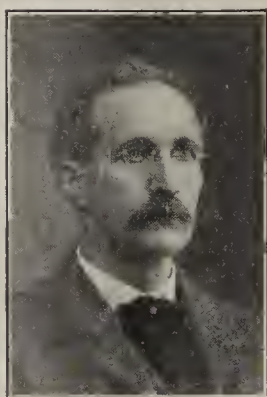
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Chairman Committee on Legislation east of
Mississippi River.



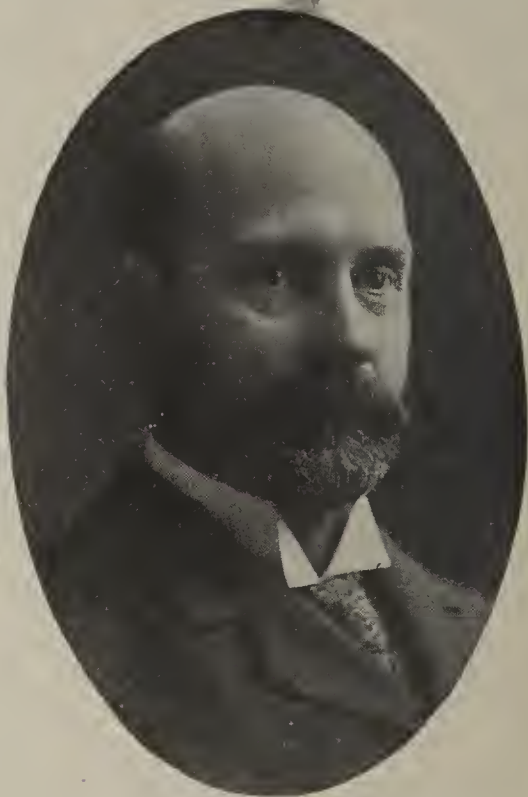
PETER YOUNGERS
Chairman Committee on Legislation west of
Mississippi River.



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Chairman Program Committee.



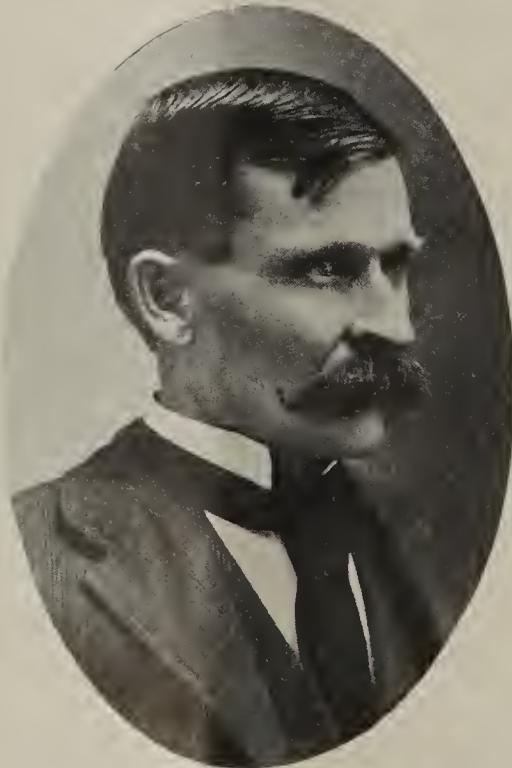
PROF. JOHN CRAIG, Ithaca, N. Y.
Chairman Editing Report.



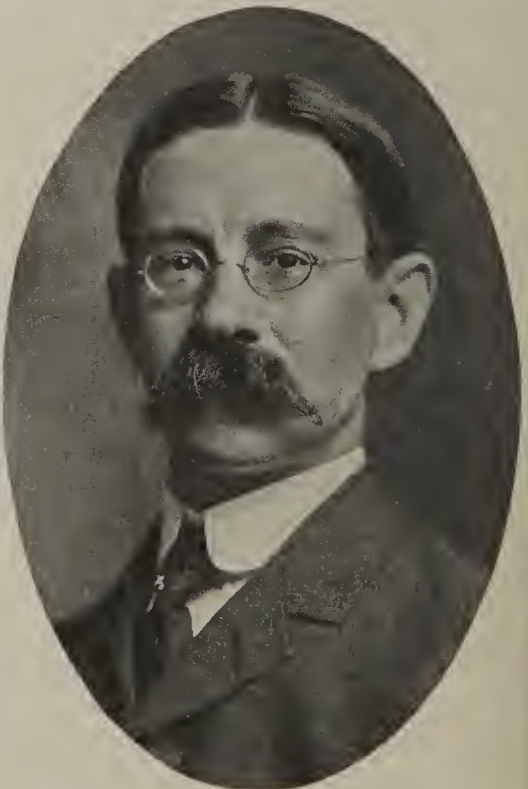
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Chairman Nurserymen's Share in Civic
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CHAIRMEN OF AMERICAN ASSOCIATION OF NURSERYMEN.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII

ROCHESTER, N. Y., AUGUST, 1910

No. 8

EDITORIAL WANDERINGS

The Season Out of Joint. The Middle West. The Passing of the Great American Desert

A trip of some seven thousand miles from New York to the western slope of Colorado and south to Florida during the fore part of June revealed unusual seasonal aberrations. The exceptionally warm wave of March, continental in extent, was succeeded by cold rains interspersed by colder frosts and snows, which continued with wearying monotony up to the middle of May when the frost period may be said to have closed. But in the Mississippi Valley at any rate cold rains retarded vegetation very seriously as late as June tenth.

In crossing Iowa and Illinois the second week of June, the backwardness of the corn crop, only then appearing above ground, was a general source of comment. A week later in Missouri the corn seemed to have made very little progress, while it was astonishing to find in Tennessee and Northern Alabama, cotton only a few inches high and corn only fairly well established as late as the middle of June. Eastern Kansas and Nebraska had suffered in common with the entire Mississippi Valley and it will certainly take a lot of summer heat to even things up by the usual harvest period. Central Kansas seemed to be the western boundary of the wet belt. Eastern Kansas was certainly soaked and the outlook for corn farmers was discouraging as late as the middle of June. Potatoes, however, looked well, as seen from the car window, from Kansas City to St. Louis. This is a great mule country and the breeding of this splendid work-animal seems to be a thriving branch of animal husbandry.

AGRICULTURAL CONDITIONS IN THE MIDDLE WEST

Iowa and Illinois are the greatest purely agricultural states in the union. Land values have increased from 50 to 100 per cent during the last ten years. The movement is upward in most places, even at the present time, but it is not likely to advance much more until the newer lands farther west are occupied and improved.

Remarkable it is that in a preëminently rich agricultural state like Iowa there has been practically no increase in population during the last decade. It is more than probable too that there are fewer people residing on farms today than there were ten years ago. The drift is from the country to the town or city. Iowa is a state characterized by a large number of small cities. It is quite the custom for the well-to-do Iowa farmer of middle life to sell or rent his farm and

retire to the town. It often happens too that the farm is bought by the local capitalist who works it in conjunction with other lands in the vicinity, and the countryside loses a family. It is a remarkable fact that some of the richest counties in Iowa, Illinois and Ohio have lost in population during the last decade. On the contrary most of the cities in this region have increased—some of them doubling their population during the period. If then the population of the state of Iowa has not increased as a whole while the towns and cities have grown much more populous it follows that the country has supplied the men and women who have enlarged the cities. Is not this the condition in New York and New England, which is the cause of so much anxiety on the part of Secretary Wilson and certain supposedly well meaning politicians? As land values increase the tendency is for this land representing the capital of the country to drift into the possession of the moneyed class. It is probably safe to say that Iowa can claim more landlords today than at any previous period in her history. As landlordism increases more country houses will be unoccupied, and shall we not hear very soon of "abandoned farms" (rather abandoned homes) in the fertile Hawkeye State as well as among the hills of New England and New York?

The capitalist who invests merely for the purpose of safeguarding some money, feeling that the natural increase in land values will give him a fair interest on his investment, is a poor type of country citizen—and yet they are to be found on every side. These are the persons who retard agricultural progress. One live, intelligent farmer is worth more to his country than a score of such landholders. The example of a successful farmer is a most valuable stimulus in a community while the inaction of the uninterested capitalist acts as a brake on the wheels of agricultural advancement.

IRRIGATION AND DRY LAND FARMING

In making a trip eastward over the Colorado Midland and Rock Island Railways from the western slope of the Rockies to the Missouri River the traveler has exhibited before him in an interesting way the various stages between arid conditions and adequate rainfall distributed normally as to quantity and season. On the west slope of Colorado and the high interior tableland one sees a type of vegetation developed as a result of peculiar fitness for semi arid conditions. The bunch grasses, the sage brush, the cactus

and saxifrages abound naturally. Of all the cultivated crops it is probable that alfalfa—that wonderful forage plant, thrives best with a minimum of water. So we find the rancher growing his alfalfa and his oat hay, depending on winter moisture to a considerable extent to push the latter. Not the least interesting fact in this connection is the growing of great areas in regions popularly supposed a few years ago to be desert lands and only recently made productive. The secret of the crop producing power of this soil is due not to irrigation or fertilizing but rather to the conservation and complete utilization of the natural rainfall. This is done by special methods of soil manipulation. The same system is in vogue in the dry sections of Nebraska, Montana, Wyoming and farther west; and has also found its way into the Canadian Northwest where the same conditions of naturally rich soil and limited rainfall prevail. So the traveler's eye now sweeps over great stretches of wheat, of oats, alfalfa, and farther east of potatoes and corn, where but a few years ago the rancher shared the territory with the Jack rabbit, the coyote and prairie dog.

The traveler from the East cannot help wondering as he compares vegetative growth at home with that which he sees in this region; as he remembers and contrasts the home comforts and the home beauties of the snug cottage in New England with the desert-like barrenness of the Westerner's shack, what is the overpowering inducement which carries a settler away from the East with its large opportunities to these rough and crude surroundings? As a matter of fact, much of this land is taken up by the sons of men who themselves settled with the advance guard of pioneers a generation ago. The natural thing is to go West. The East does not spell opportunity to these men. While it often beckons the ambitious professional man or the capitalist, it has little attraction for the western bred. Then again, the immigrant is either settled in an eastern city or hurried through to the golden west, and thus this western land is filling. While the Easterner may be bound to his native heath by association and tradition the Westerner is governed by an exhilarating spirit of optimism. He thinks less of the home plot than of the entire western country. The spirit of the West which knows no bounds is his, and if Kansas does not suit, Colorado or Idaho are equally compelling and possess the essential requirements. But the tide is bound to turn and it requires no prophetic vision to proclaim the time not far distant when the lands of the East will again be in demand not merely as summer homes for the rich but as orchard, truck and dairy farms by men who will appreciate the native fertility, the abundant precipitation and the proximity of the great consuming centers of the eastern states.

BRITISH COLUMBIA "INFESTED" BY INSPECTORS

Nursery conditions in this part are such as to drive any self-respecting nurseryman out of business. Years ago, before we heard of all these new jaw breaking names for all these old fungous and insect pests with which our orchards have been infested for hundreds of years, and long before we were attacked by these long haired college graduates with

"Prof." as a handle to their name, who are allowed to run at large without a muzzle, supposed to teach other people how to conduct their business, nurserymen were considered a fairly respectable class of people. Now, conditions are changed and with a class of lecturers running around the country telling the planters that nurserymen are rascals and that the government now compels them to take out a license and also put up a bond of \$2000.00 to be honest, it places the nurseryman lower than the lowest and he feels like undertaking to get into some really reputable business.

At present all imported stock has to go through the Dominion fumigating station first, whether it is free from disease or pests or not; then it is turned over to the provincial inspectors and again fumigated if it shows any signs of pest or disease. After that, the importer gets what is left by paying the bills for inspection. What trees that survive is quite another story!

I presume the conditions are much the same all over the United States as well as Canada and apparently the only requisite to get the billet of inspector or lecturer, is to be a good government supporter. One amusing incident happened a few years ago when a new man came into my nursery and told me "he had the billet of inspector but knew nothing about it and wished me to show him around." I spent some time showing him around, telling him of the different fungous diseases, pests, etc. and the next day I received a bill from the government for \$3.50 for inspection—which I paid. Brain food was scarce about that time or I should have sent in a contra account of \$10.00 for professional advice as a doctor or lawyer would have done. Another inspector compelled me to dip a bale of trees in whale oil soap solution that showed a bit of grafting wax on the root and had been under the ground long enough to turn it white! Another one passed a nice lot of Bartlett pears which I shipped to a customer only to have part of them condemned by the next inspector who took a whirl at them. No nurseryman who is in business has any objection to inspection by competent men, but under the present regulations he is the "under dog" and if he has any self-respect may as well step down and out.

British Columbia.

WESTERN NURSERYMAN

PECAN STOCKS TENDER IN THE NORTH

Dr. Robert T. Morris, the eminent surgeon of New York City and nut specialist of Connecticut, reports a heavy loss of shagbark hickories on his grounds, which were stock grafted on pecans. This injury took the form of bark-bursting, and occurred after the first accession of warm weather in March. Dr. Morris reasons that the injury was due to the early starting of the sap in the pecan stocks, and the sudden drop of temperature, following that condition.

This experience is a useful though an expensive one to Dr. Morris, in that it suggests caution in using stocks for the propagation of shagbarks which are not themselves thoroughly hardy. It is the same principle which meets the propagator of plums or of apples in northern sections, where root-killing occasionally occurs. Not only must the scion be hardy, but the stock itself must be hardy. Dr. Morris makes the additional point, growing out of his



J. W. HILL, Des Moines, Iowa
Chairman Committee on Co-Operation and
Entomologists.

experience in the use of pecan stock for hickories, that these stocks tend to encourage growth so late in the season that the scions do not properly ripen and winter injury is likely to occur.

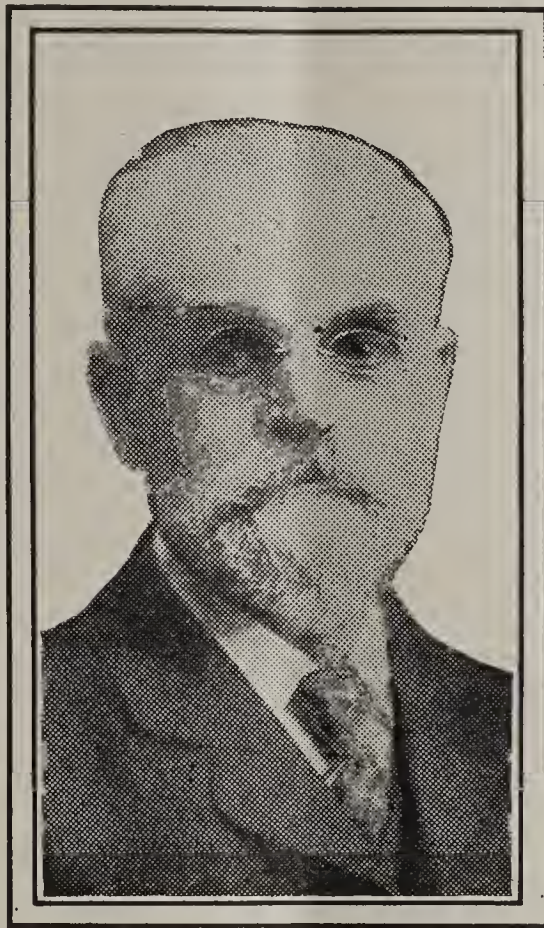
BINGHAMTON'S TREES

The Chamber of Commerce of the city of Binghamton, N. Y., is taking an active

out very completely, and much business of importance to the nurserymen of the Pacific Coast was transacted. The entertainment provided by the Milton Nursery Co., of Milton, Ore., was a feature which will never be forgotten. The trolley ride from Walla Walla to Milton, Ore., afforded members an opportunity to see the country, and the ride



F. A. WEBER, Nursery, Mo.
Chairman Committee on Entertainment.



JOHN HALL, Rochester, N. Y.
Chairman Committee on Arrangements.

interest in the improvement of the street trees of that city. An examination of the trees has been made by Professor Craig of the Department of Horticulture, Cornell University, which describes their present condition, and makes recommendations for their improvement. The report condemns the use of such trees as poplars, soft maples, and box elders in the streets, and deprecates the planting of saplings known as pole trees, which make poor tops and are short lived. It also deals with insects and fungous affections of shade and ornamentals. The important work of tree improvement is in the hands of Mr. Kenneth Rockwell, a student of the College of Agriculture.

through the nurseries in automobiles and carriages gave them a chance to see great blocks of trees uniform and free from insects, the entire nursery without a weed. A picnic luncheon was ready for the members at the residence of the senior member of the firm, Mr. A. Miller which was greatly relished. High tributes of praise were expressed by both the local people and visiting nurserymen with reference to the work of this firm as to the careful manner in which every detail of their nursery work is planned and carried on. The Commercial Club of Walla Walla entertained royally at an informal reception on the evening of July 12th. Pleasant addresses were made on the part of the local people and the nurserymen, and all enjoyed the event

PACIFIC COAST ASSOCIATION OF NURSERYMEN

The eighth annual meeting of the Pacific Coast Association of Nurserymen closed its session at Walla Walla on July 14th. It was the largest and most representative meeting ever held, the states of California, Utah, Idaho, Oregon, Washington, Montana and the province of British Columbia all being well represented.

The program as arranged was carried

immensely.

It was decided to hold the next convention in California, probably at San Jose, first Wednesday after June 20th, 1911.

George C. Roe of Fresno, Calif., who was very active throughout the entire session, was elected president. The other officers elected were: State vice-presidents—for Washington, George Peaslee, Clarkston; for Oregon, J. B. Pilkington, Portland; for Utah, E. M. Tyson of Brigham City;



ORLANDO HARRISON, Berlin, Md.
Chairman Committee on Publicity.



J. M. IRVINE, St. Joseph, Mo.
Chairman Committee on Co-operation with Fruit
Growers and Associations.

California, W. B. Eberley, of Niles; for Montana, D. J. Tighe of Billings; for Idaho, C. P. Hartley, of Emmett; British Columbia, Richard Laritz, Victoria. C. A. Tonneson, Tacoma, Wash. was reelected secretary and treasurer.

The different committees are as follows: Reception committee, C. F. Breithaupt, Richland, Wash.; C. W. Howard, Hemet, Calif., and F. X. Bouillard, Chico, Calif.

Executive Committee, A. McGill, Salem, Ore.; Leonard Coates, Morganhill, Calif., and J. A. Stewart, Christopher, Wash.

Transportation Committee, Albert Brownell, Portland, J. B. Pilkington, Portland, and F. A. Wiggins, Toppenish, Wash.

Chairmen, Legislative Committee: M. McDonald, Orenco, Ore., P. A. Dix, Roy, Utah; Chas. A. Chambers, Fresno, Calif.; C. P. Hartley, Emmett, Idaho; A. Eckert, Detroit, Wash.; J. Tighe, Billings, Mont.; and F. R. E. DeHart, Kelowna, B. C.

Judicatory, C. J. Atwood, Toppenish, Wash.; Orin Wheeler, San Jose, Calif. and H. A. Lewis, Russellville, Ore.

Membership Committee: S. A. Miller, Milton, Ore.; F. K. Spaulding, Sunnyside, Wash., and Jno. Armstrong, Ontario, Calif.

REVIEW OF SEASON

[Continued]

Pear Seedlings (Japan).—In good condition; supply light.

Forest Tree Seedlings.—Not many grown here with the exception of Catalpa. On account of there being an over-supply of Catalpa last season, the plant was much lighter last spring. We do not look for a surplus next winter. Apple trees are doing fairly well now, but the blocks are small. Will be no surplus in the upper grades. Peach and plum are not grown here in a large way. There will be a light supply of these. Kieffer pear is making a satisfactory growth but there are not as many as usual. Cherry—a few more than last season. But they are not grown here extensively. A fine rain last night relieves conditions caused by a thirty day's dry spell.

J. H. SKINNER & Co.

GLEN SAINT MARY NURSERIES, FLA.

The earlier portion of the season was unusually dry, and in some cases interfered with the securing of a good stand of cuttings and seedlings. Later on, however, the season has been very favorable, and although recent rains have interfered somewhat with cultivation, yet we have been able to work the stock out, and it is in very good growing condition now, and promises to be fully up to our standard by fall.

There appears to be considerable shortage in the supply of citrus trees in the state on Rough Lemon and Sour Orange stocks, but aside from this, the general lines of nursery stock are in about the usual supply and demand. Present conditions are very favorable for the winter 1910-11.

PIONEER NURSERIES CO., SALT LAKE CITY, UTAH

We have had no rain whatever here this season, which makes stock planted out this spring grow rather slowly; even though we have irrigation there is nothing like a little rain.

Apple grafts are almost a failure, and there is a general shortage on most lines of nursery stock in this vicinity. The outlook for fruit is good.

THE GRIFFING BROTHERS COMPANY, JACKSONVILLE, FLORIDA

The severe drought in March, April and May seriously retarded spring growth on all kinds of nursery stock, especially pecans, citrus and peach trees. Other lines, such as roses, ornamentals, etc., were damaged, but not to the extent of the former. Since the June rains have commenced, stock is growing very rapidly, but owing to the erratic season that we have had, the probabilities are that stock will be light this fall.

Our own supply of budded and grafted pecan trees, citrus trees on citrus trifoliata roots, figs, Japan persimmons, peaches, and field grown grafted rose bushes, also conifers from both seedlings and cuttings, is the largest this season we have ever had, and aside from the fact that the sizes will not run as large as we would have liked, the stock promises to be of the very best quality.

Taking it as a whole, we consider the nursery conditions in the South the best they have been in the past fifteen or twenty years, there having been a steady increase in demand for stock in the past three or four years, which together with the interest in the South's development shown throughout the country, indicates that this increasing demand will continue for the next four or five years, and probably indefinitely. This increasing demand is not alone for fruit and nut trees, but for ornamental plantings as well.

W. S. GRIESA FELLOWSHIP

The University of Kansas is conducting a research fellowship in Entomology for an extensive and fundamental investigation into the most practical and feasible means of dealing with the Woolly Aphis in nursery stock. The fellowship was established by Mr. W. S. Griesa, one of the leading nurserymen in the Middle West and proprietor of the Mount Hope Nurseries, Lawrence, Kansas. Mr. H. W. Lohrenz, a graduate research student of Entomology, University of Kansas, has received the appointment as fellow and began his work on June 15th.

VACATION IN EUROPE

Mr. and Mrs. Henry B. Chase, Huntsville, Ala. and D. S. Lake, Shenandoah, Ia, sailed Wednesday morning, July 20th, on the "Majestic," White Star Line, for Europe. They expect to be gone a month and to have the trip of their lives. They will make a study of the French nurseries.

BRIGHT AND CLEAN

"Enclosed is one dollar (bright and clean like your paper)."

Quincy, Ill.

GUSTAV KLARNER.

A MID-SUMMER REVIEW OF NURSERY CONDITIONS

ROCHESTER, N. Y.

In a general way the nursery stock at the present time looks very well, and we are in hopes of having our usual supply. The shortage we believe will be chiefly in apples and peaches. We do not look for any surplus in any line for the coming season. At least we have none that we can call a surplus now.

ELLWANGER & BARRY.

GENEVA, N. Y.

The past spring's business has been the largest in the experience of this company and we cleaned up practically everything we had in salable grades. The planting season was particularly favorable, having good rains after the stock was planted, consequently everything is looking well and growth generally is satisfactory. We are having a dry spell at present, but so far it has not been serious enough to injure nursery stock or stop the growth.

It seems to us that the demand for stock for the coming season is quite unusual for this time of the year. We look for good average prices for the year to come. From what we have seen of plantings in certain localities it is quite evident, however, that the era of high priced fruit stocks will shortly be over, unless some unforeseen accident should destroy part of the crops which have already been planted.

W. & T. SMITH COMPANY

CHAUTAUQUA CO., N. Y.

We are having splendid growing weather here now and stock is making a strong, vigorous growth. Two year old grape vines and currants especially have done well. The weather is getting dry and we need rain which would help cuttings. There is about the usual supply of grapes, currants and gooseberries grown here and all are looking well except the cuttings which need rain. While it is yet early to judge what trade will be, yet indications point toward good sales.

T. S. HUBBARD CO.

NEWARK, N. Y.

Here the cold, wet spring did not enable us to finish planting until somewhat later than usual; the warm, dry weather that followed was ideal for growing; stands are good, and stock looking as well as it ever did. We are well up with our budding.

Having no retail trade of our own, and growing entirely for other nurserymen, we cannot say that we are ever either "long" or "short"; we grow about the same list of stock each season, with such increase as the growth of our business justifies, without "plunging" on anything. We have about our usual blocks. It has been an ideal season so far; we could not ask anything better.

Yours truly,

JACKSON & PERKINS COMPANY,

By JOHN WATSON, Secretary.

P.S.—The proof of the pudding, or, properly, of the pie, being in the cherries, we don't know of a better argument for planting cherry trees than the high prices paid by a large cannery. Farmers about here are collecting large sums for fruit from the trees along the lanes and division-lines; how much better than unproductive shade trees! One farmer told us yesterday he had gathered in \$200 for fruit from the cherry trees along the roadway in front of his place. With sour cherry orchards bringing growers \$1,000 an acre this year, cherry trees ought to be in demand.

[NOTE.—Prices offered by Newark, N. Y. cannery in another column.]

POST CARD ANSWERS

MARYLAND

The nursery conditions so far as I can see are about the same as last season in this section. The season has been a very peculiar one. Stock is making good growth now. It looks to me as if there is going to be considerable shortage in peach and possibly apple. Other stock I think will be equal to the demand. I grow nothing but grape vines and may be somewhat long on Concord. I never had cuttings do better than those planted last spring. All my one year transplanted are going to make exceedingly heavy vines. The weather here has been very warm and dry for the past 10 days. Rain, which was needed badly, came on the evening of the fourth and all the crops that had been thoroughly cultivated are making growth very fast and show very marked improvement in the past 48 hours. I see no reason why we should not make fine growth from now on and have No. 1 stock. The grape crop in Delaware is not going to be a heavy one, possibly something over a one-half crop, at least so reported to me last week; late frosts injured the bloom; very few vineyards grown in this immediate section.

Peaches, pears and plums, good crop; apples three fourths. More early than late varieties. No large orchards here, mostly truck crops except strawberries; these are planted heavily and have paid well. The prospects are that the demand for strawberry plants will be heavy and the supply of plants likely short unless the splendid rain of the fourth came in time to make abundance of plants. August usually is our best month for runner growth.

Salisbury, Md.

CHAS. M. PETERS

GEORGIA

The June rains have caused all nursery stock to make up for lost time.

A large proportion of our one year apples are already five feet, and trees are branching nicely. Plenty of peaches now 6 to 7 feet. One year plums headed back to three feet four weeks since are already four feet and well branched. Ornamentals are also putting on a good growth. The demand for ornamental trees and shrubs and coniferous and broadleaved evergreens is on the increase.

Prospects for fall trade very promising. At this date cannot say what line of stocks are likely to be in abundance, but there will be a shortage of apples, peaches, plums and pecans.

The Georgia peach movement is now on in earnest, but the continuous rains for the past four weeks in some sections has caused Brown Rot, but orchards which have been thoroughly cultivated, sprayed the proper number of times with self-boiled lime-sulphur and arsenate of lead mixture, and where a fertilizer containing a large percentage of phosphoric acid and potash and a small percentage of nitrogen, has been used, show no signs of decay.

The Georgia Fruit Exchange is handling the peach crop of Georgia to the satisfaction of all its members. The exchange by properly distributing the peaches has brought satisfactory returns to its members, and this has given a new impetus to commercial peach orcharding in this State. We look for heavy planting this fall.

Augusta

P. J. BERCKMANS CO.

NORTH CAROLINA

At this writing "the prospects look bully" for a fine line of stock and a big trade for fall delivery.

We had a few weeks of dry weather in April, but not enough to injure seriously, and since then we have been having a splendid season and one could not wish finer growth than we are getting on almost everything at the present time.

It looks as though we will be far short of the demand on Amour River privet, as we will only have about half a million plants in surplus, and since the severe cold last winter freezing out many other kinds in the cold states of the North and Northwest we are having calls for this stock from all sections and had up to the first of July entered more orders than ever before up to September the first.

The past season we shipped this stock to 34 states. From Illinois where we ship in lots of 10,000 at a time to nurserymen for their retail trade they write describing it:

"The best variety in existence for hedge purposes, and leader in the class of deciduous hedges. It is recognized the world over as the 'Ideal Hedge Plant'. A fast grower and a variety notable because of absolute hardiness even in cold, northern climates."

Bostic, N.C.

VALDESIAN NURSERIES,

By GEO. W. JONES, Mgr.

PENNSYLVANIA

Up to this period we have had a most excellent growing season with ideal conditions, plenty of rain in the early part of the season when the freshly transplanted stock mostly required moisture, and later plenty of warm weather.

Our young transplanted plants are in a better condition than we have ever had them before. We have had a very small percentage of loss, and while at this period the growth is not as large as usual, yet the foundation has been laid for a most excellent growth during the summer.

We are happy to say that we are not "long" on any line of stock. We grow ornamental trees, shrubs and hardy

perennial plants exclusively, but we have always been conservative in our planting, basing this on past sales, and planting sufficient each year to allow for a normal demand. In this way we rarely have a surplus, and if we happen to run short we can usually pick up what additional stock we require from some nurseryman who has planted more stock than his normal demand calls for.

Of course no nurseryman can actually judge his requirements,—in some things he is bound to have a little too much and in other things not sufficient.

There seems to be a good outlook for cleaning up of pretty much all good salable ornamental nursery stock this fall and next spring and at good prices. We see no reason why a nurseryman should lose any sleep over the selling end of the business this year.

THOMAS MEEHAN & SONS, INC.,

Dresher

THOMAS B. MEEHAN, Secretary.

INDIANA

Trade for spring was good considering the short period we had to deliver. The spring was very hot and dry which forced the buds so early that digging from the nursery row was out of the question after April 1.

We have a splendid stand of cherry buds which now give promise of as fine trees as we ever grew. We have a good stand of apple grafts and peach seedlings as well as all seedlings planted this spring. The past month has been excellent growing weather and the stock is making up well. Our two year cherries are still growing and have a very long, heavy limb growth and promise to be nearly all No. 1.

Apple and peach seem to be short. Cherries are fairly plentiful but the indications are that all will be cleaned up before the season is over.

We have a good supply of pecan trees in our Florida nursery but the demand has been so great that we are already about sold out.

Vincennes

H. M. SIMPSON & SONS.

OHIO

We suppose the situation here is a good deal the same as it is all over the country. Warm weather in March starting stock early, while the cool weather in April and May held it back and frosts did considerable damage the last of April. We had good soaking rains in early June and are having nice rains again now, so that we are having a good growing season at present.

It is, of course, too early to make close estimates or know what the demand is going to be for nursery stock, and longs and shorts depend a great deal on the demand.

From what our correspondence would indicate at present we do not think there is anything in the fruit tree line that there is liable to be much surplus in. We believe the demand will clean up all stock there is on the market. We look for a shortage in peach, eastern varieties of apple and some varieties of plum.

Painesville

THE STORRS & HARRISON CO.

OKLAHOMA

Those June rains failed to materialize here, but even at that we are getting an extra fine growth on all nursery stock. In fact, we have never seen better growth, or better prospects for an extra fine lot of trees, than we have here this season. It looks now as though the supply in this section, would fall below the demand, for the demand is very brisk at this time, and with prospects of heavy farm crops, and a fair fruit crop, the demand for all lines of nursery stock is going to be heavy.

These dry seasons compel one, if he wants to grow good trees, to keep his cultivators, everlastingly at it, but good and thorough cultivation, always pays, in the opinion of the writer.

THE SOUTHWESTERN NURSERY COMPANY,
Oklahoma C. M. REDMOND, Gen'l Mgr.

NEBRASKA

Your letter received, and in reply will say that up to date in this section of the country, we have had no rain for the past four or five weeks. Everything is dry and nursery stock is coming slow. In this section of the country there has been great damage on account of the drought, to all young stock, planted this spring.

We look for a big shortage in apple. We expect a surplus in all grades of plum and cherry, and in small grades of apple, grape vines and in shade trees, etc.

Yours respectfully,
Fremont B. E. FIELDS & SON

KANSAS

Owing to the cool late spring and dry weather, nursery stock in this locality, although a fairly good stand, is much more backward in growth than usual.

There is no peach stock to speak of in this whole section of the country. Owing to the light plant of apple grafts and the fact of the heavy digging of yearling apple last year, we look for a great shortage in apple, peach, plum and apricot. Cherry and pear of all varieties, especially Keiffer and Bartlett seem to be in surplus and in a very big demand.

The demand for catalpa seedlings is beginning to open up and bids fair to be above the supply. From all reports we can get, it looks as though there is not half the surplus there was last year; hence we look for them to be cleaned up better this year.

J. MONCRIEF

MINNESOTA—DRY WEATHER

Nineteen hundred and ten bids fair to go on record as a season of drouth. In our nursery we have had just one good rain this spring, about the middle of May. There have been local showers throughout various parts of Minnesota and the Dakotas but nothing to insure general crops, and the result apparently will be a short crop of most all grains. The pastures have dried up badly and the receipts of the packing houses in this section show that a large part of live stock is being turned over at a sacrifice on account of the probable scarcity of forage and feed.

The outlook for sales in the nursery line does not look bright. In our nursery we are getting some good growth in many cases but young stock put out this year is of course suffering. Our apple plantings of 1908 and 1909, look fine. The same is true of our plums, but the large demand for these the past two years would indicate that there will be no surplus to speak of in this section.

THE JEWELL NURSERY CO.

TENNESSEE

Our stock is making a good growth and we will be fairly well supplied with peach, Japan plum, apple and some cherry.

We find our June budding of peach is a success, and will have a good supply to offer. Our two year apple are making up nicely, and we have a good stand for grafts. Fully 50 percent of our Morello cherry will make up into eleven-sixteenth inch four foot trees. We are well pleased with our location. The soil produces a good grade of stock, and being so close to Nashville, we have splendid shipping facilities.

THE GREENBRIER NURSERY CO.

KANSAS CITY, MO.

We have had some good rains the past few days and stock is now coming along nicely. Have a good stand of peach seedlings, which we will commence to bud next week. Only a fair stand of grape cuttings. Ornamental cuttings are doing nicely. Have a good stand of privet cuttings. Apple grafts have not done very well, seemed to start out very well but went back.

There appears to be a shortage of apple and peach here.

GEO. H. JOHNSTON

PANHANDLE NURSERIES

We felt rather discouraged early in the spring on account of the damage done by the frost which very materially affected our stand of pear, plum, cherry and peach buds, besides a great amount of other stock. But we are feeling greatly encouraged now as we are having fine growing weather, the stock has come out wonderfully and is making a fine growth under practically ideal weather conditions.

The salesmen report a better business than they enjoyed last year at this time with a bright outlook for future business. Taking all together, we can report that we are glad that we are in business and believe we will make enough to pay the expenses of the Denver trip this year.

Greenfield, Ind.

J. K. HENBY & SON

TOPEKA, KANSAS

With us the early part of the season was too dry for planting, causing in some instances light stands of seedlings, grafts and budding stock.

Apple Seedlings.—Think we have in this valley about as many in sight as at this time last year. But conditions at this time indicate that there will be fewer number one stocks than last season.

[Continued on page 678.]

THE EFFECT OF CROWN GALL UPON THE ORCHARD

PETER YOUNGERS, Geneva, Nebraska

It has fallen to my lot to discuss this important subject as chairman of a committee appointed by the Western Nurserymen's Association, and instead of making a report to the Western Association, I have been requested to report to the National Association. I realize that the task is not a pleasant one as there has been so much written and so many laws enacted on this subject that the only way to determine this is to weigh the evidence that is produced on both sides of the question. In the first place, we have very learned scientists who have a theory that this so-called Crown Gall is infectious, but often theories are not facts, and as yet we have been unable to get satisfactory proof of that being the case. Can it be that they have erred in their calculations as the astronomers erred in predicting the course of the comet?

EXPERIMENTS AND EXPERIENCE

There is quite a difference between conducting an experiment in a greenhouse where the temperature and moisture can be kept at any desired degree and having the same experiment conducted in the orchard where the trees are subjected to nature's whims. While we are willing to yield to the scientific man every honor for his faithful research in order to help us to solve the different problems that arise, and we, as nurserymen are more vitally interested than any one else, for if it is found by positive experiments to be a fact that the so-called Crown Gall is infectious and dangerous to the orchard interest, the nurserymen must abandon the growing of apple trees, but we know that years before the scientist ever mentioned the Crown Gall, orchards were being planted that today are a source of revenue to the owners. Over thirty years ago, the writer saw this same Crown Gall on the apple trees and no tree was rejected because the Crown Gall was present, unless the gall was so large as to cause comment and it was then rejected, not by the inspector, but by the nurseryman.

CAUSES OF ABNORMAL GROWTH

There are many reasons for abnormal growth at the crown. Sometimes it is caused by a defect in the union where it is grafted, which the tree soon outgrows. Sometimes by mechanical injury, caused by the cultivator or the hoe in the process of cultivation, which causes an enlargement similar to an enlargement caused by a broken bone. Aphis has also been known to cause lumps at the crown which are classed as crown gall, and anything that has an enlargement from any cause is thrown out, not by the inspector, but by the nurseries, as experience has taught the nurseryman that the only safe way is to throw out the tree that shows any signs of the so-called crown gall, and in many instances it takes more than the profit of the entire block of trees. Not that the trees thrown out would not grow and produce profitable trees, but because the inspection laws and inspectors will not discriminate against any mechanical injury, but condemn all, regardless of the cause.

The inspector simply does his duty as the law requires and should not be censured for so doing, but if the scientific man can or will enlighten us so that we may be able to distinguish between the so-called infectious gall and the galls or warts caused by grubs and mechanical injury, and so that the inspector can be educated to determine quickly the difference between them, they will help to solve the question to the benefit of both orchardist and nurseryman.

EFFECT OF SOIL

We find that the old nursery land does not contain as much Crown Gall as the newer land. We also find that the new alfalfa sod produces more Crown Gall than older land, which shows most conclusively that the older lands are freer from insects that work upon the roots of the trees and injure them and that if it was infectious the trees on the older lands would have the same proportion of Crown Gall that those have that are planted on the new lands. And again, if this Crown Gall will injure the tree why will the largest and strongest growing tree in the nursery be affected with so-called Crown Gall; yet the nurserymen present will bear me out in this assertion.

We all know that the Wealthy apple is one of the hardiest and most prolific trees in the orchard and that it also contains more so-called Crown Gall than any other standard variety in the nursery. If this so-called Crown Gall is infectious, why will the varieties grown on either side of the rows of Wealthy escape infection and produce only a limited number, or no Crown Gall.

We have an instance that we can refer to in the Marshall Brothers orchard, at Arlington, Nebraska, and I will read their letter on the subject. The gentlemen are known as honest, reliable and conscientious men, keen observers and unbiased in their judgment, and in addition they have the proof that cannot be successfully contradicted.

EXPERIENCE OF NURSERYMEN

ARLINGTON, NEB., March 10, 1910.

Peter Youngers,
Geneva, Neb.

Dear Sir:

Answering your favor concerning the Crown Gall trees of which you witnessed the digging in our orchard on February 25th, will say that during the spring of 1895, while digging and delivering the Wealthy apple trees, we found so much crown gall that through curiosity we planted a row of 24 trees, all crown gall trees, across our orchard. Then we selected out 7 or 8 trees containing the largest galls which it was possible to find and planted them as fillers between the other trees in the commercial orchard north of the railroad. These were the trees that you witnessed the digging of. These trees were three years old when transplanted, making them 18 years old this spring. They have borne profusely ever since old enough, and the premiums that we have been getting at the State Fair, for the best 50 plates of autumn apples these late years, were won by apples picked from these trees. They bore from 8 to 15 bushels each the past season. The row of trees that

we photographed south of the track is this row of 24 crown gall trees.

Further, during the spring of 1893, we planted a thousand trees consisting mostly of Winesap, Ben Davis and Jonathan. At least 20 per cent of the Ben Davis and Jonathan were crown gall trees. We did not throw any out, but planted them all and this is the orchard that you and Will Harrison, of York, Neb. and Mr. Kirkpatrick, of Texas, walked through while here in February, and that you thought was so thrifty, even and nice. This orchard has borne fine and has never had more than 5 or 6 trees transplanted in it. The first 600 trees on the east side of this orchard yielded 6,000 bushels of fine apples this past season. Sylvan Newhall, of South Water St., Chicago, packed them in the orchard and I think he will verify our statement as to the strength and bearing quality of the trees, and also the quality of the fruit.

We have never seen an even, nicer lot of trees in the United States and we invite inspection from anybody who may have any doubt about this kind of crown gall injuring trees. This crown gall had ought to be looked into as it is causing the destruction of thousands of dollars worth of first class trees and is causing the commercial orchardists to pay a great deal more for his trees than he otherwise would have to.

It seems that the inspectors don't know the difference between the different kinds of crown gall and since there are one or two kinds that have been found to be undesirable in the orchard they have thrown out everything that they found with a knot on the roots as being injurious and dangerous. But our experience has been that 99 per cent of this crown gall is simply caused by a rough graft or a scar of some kind, and is absolutely harmless even to the tree that it is on.

Hoping that we have given you the information desired and that we will see you at Denver, we remain,

Yours very truly,

MARSHALL BROS.

IN MISSOURI

May 17th, 1910.

Hon. Peter Youngers,
Geneva, Neb.

Dear Sir:

Inasmuch as I am away from home, and cannot refer to letters and data which I have at home, I cannot give you the information as precise as I could if I were at home, but will say that (I think it was December of 1901) at the Annual Meeting of the State Horticultural Society held at Farmington, Mo., I exhibited some two year old apple trees which had some of said knots on them, and I asked for information as to what best to do with the trees. The said trees were from my private nursery, raised for my own use and not for sale. I wanted to know what others thought of those knots,—as to myself I had my mind made up, as I had seen such knots, more or less, ever since I was a boy, on my father's farm. The State Horticultural Report gives an account of what happened at the Farmington meeting. There was present a young professor (I think Van Schenk or some such name) and he took the position that I should burn all my apple trees,—and further stated that there should be a law compelling me to do it. I informed him that I thought the trees were good and healthy, and as they were MY TREES I would risk planting them in my own orchard,—and I did so the following spring, and today they are growing and are fine trees, just what I said they would be.

If you wish to know more about this please write me at my home at Boonville, Mo., and I will look it all up for you.

Yours very truly,

CHAS. C. BELL.

BOONVILLE, Mo., May 26th, 1910.

Dear Sir:

In further answer to your former letters concerning my experience with Root Gall, will say, that I have just returned from my orchard where I planted in the spring of 1901, those two year apple trees which were affected with Root-knot (or what Prof. Hermann Von Schrenk and the others at Farmington meeting in December 1900, pronounced Root-gall) and I found the trees growing and in a very healthy condition, and in every way satisfactory, perfect specimens of healthy, well shaped, vigorous growing apple trees. The history of these trees is briefly as follows:

In December 1900, they were two years old and stood in my private nursery, raised for my own planting. There were several thousand, and while from all appearance they were a healthy looking lot of trees, yet most all of them were more or less effected with root-knot (or what I years ago as a boy, used to know as root warts), and hence did not see much harm in it. But as I was going to the annual meeting of the State Horticultural Society at Farmington, Mo., December 4, 5 and 6th, I took several of the trees with me in order to learn what others knew and thought of said root-knots, and you will find some of the discussions in the 43d Annual Report, on page 184 to 186, (but I find that some of the main things have been omitted in said report,—namely, that I should AT ONCE dig up and burn ALL my trees in my nursery, and inasmuch as there was no law to make me do it, there should be such a law, etc. This latter demand was specially suggested by Prof. Hermann Von Schrenk,—and you may refer to his former statement in the same report on page 117.

The Farmington report omits my reply where I tell the professor and others that I am going to set out in my own orchard all those root-knot trees, and predicted for them success, and I did so the following spring, and my healthy young orchard is today a living proof that myself and some others were right and the professors were wrong.

Yours very truly,

CHAS. C. BELL.

This is to certify that on the 25th day of February 1910, we the undersigned, witnessed the digging of the three Wealthy trees in Marshall Brothers orchard two miles east of Arlington, Nebraska, and found the trees and roots strong and healthy, and also found a small root-knot growing on the side of the main body root of one of the trees. Also found and removed a small dead root from the same tree, which evidently had a very large knot on it when planted. This tree was photographed in three different positions, then removed to storage for safe keeping, to be shipped to the American Nurserymen's Association convention at Denver, Colorado in June.

C. C. MARSHALL, Arlington, Neb.
GEORGE W. SCANLON, Arlington, Neb.
A. C. MARSHALL, Arlington, Neb.
JOE GOBBELLSON, Arlington, Neb.
H. W. MARSHALL, Arlington, Neb.
HARVEY CLARK, Arlington, Neb.
AUSTIN MILLER, Arlington, Neb.
FRED PAYNE, Arlington, Neb.
HENRY HALL, Arlington, Neb.
JAMES HALL, Arlington, Neb.
O. W. MARSHALL, Kennard, Neb.
G. L. WELCH, Fremont, Neb.
B. E. FIELDS, Fremont, Neb.
W. N. ADAIR, Fremont, Neb.

In addition to the above were E. W. Kirkpatrick, of McKinney, Tex., and a committee consisting of Peter Youngers, chairman, Geneva, Neb., W. A. Harrison, York, Neb. and Geo. A. Marshall, Arlington, Neb.

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ROCHESTER, N. Y., AUGUST, 1910.

AMERICAN ASSOCIATION OF NURSERYMEN.

President—W. P. Stark, Louisiana, Mo.; vice president, E. S. Welch, Shenandoah, Iowa; secretary, John Hall, Rochester, N. Y.; treasurer, C. L. Yates, Rochester, N. Y.

EXECUTIVE COMMITTEE—J. H. Dayton, Painesville, O.; E. M. Sherman, Charles City, Ia.; H. B. Chase, Huntsville, Ala.; Wm. P. Stark, *Ex-Officio*, Louisiana, Mo.; John Hall, *Ex-Officio*, Sec'y, Rochester, N. Y.

CHAIRMEN OF COMMITTEES.

TRANSPORTATION—D. S. Lake, Shenandoah, Ia.; Chas. M. Sizemore, Louisiana, Mo.

TARIFF—Irving Rouse, Rochester, N. Y.

LEGISLATION EAST OF MISSISSIPPI RIVER—Wm. Pitkin, Rochester, N. Y.

LEGISLATION WEST OF MISSISSIPPI RIVER—Peter Youngers, Geneva, Nebr.

CO-OPERATION WITH ENTOMOLOGISTS—J. W. Hill, Des Moines, Ia.

PROGRAM—J. H. Dayton, Painesville, O.

PUBLICITY—Orlando Harrison, Berlin, Md.

EXHIBITS—J. W. Schuette, 5600 Gravois Ave., St. Louis, Mo.

ARRANGEMENTS—John Hall, Rochester, N. Y.; J. H. Dayton, Painesville O.

F. A. Weber, Nursery, Mo.

EDITING REPORT—John Hall, Rochester, N. Y.; Prof. John Craig, Ithaca, N. Y.

ENTERTAINMENT—F. A. Weber, Nursery, Mo.

FORESTRY—A. I. Brown, Geneva, Nebr.

CO-OPERATION WITH FRUIT GROWERS AND ASSOCIATIONS—J. M. Irvine, St. Joseph, Mo.

TRADE OPPORTUNITIES—Jefferson Thomas, Harrisburg, Pa.

NURSERYMEN'S SHARE IN CIVIC IMPROVEMENT—J. Horace McFarland, Harrisburg, Pa.

ROOT-NUT—E. A. Smith, Lake City, Minn.

MEMBERSHIP—John Watson, Newark, N. Y.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckman, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.

American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.

Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.

Connecticut Nurserymen's Association—President, John S. Barnes, Yaleville; secretary, Frank E. Conine, Stratford.

Eastern Association of Nurserymen—President, W. C. Barry, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.

National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary, F. E. Grover, Rochester, N. Y.

National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O.; secretary, W. B. Cole, Painesville, O.

Pacific Coast Association of Nurserymen—President, C. Malmo, Seattle, Wash.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.

Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa.; secretary, Earl Peters, Mt. Holy Springs, Pa.

Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga.; secretary-treasurer, A. I. Smith, Knoxville, Tenn.

Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.

Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

SMUDGING PRACTICES

Although smudging, a modified form of warming the atmosphere, has been practiced in French vineyards for a number of years, its application to American conditions is of comparatively recent introduction. It was not until the orchard interests of the west slope of the Rockies had become important, and not until the annual crops were frequently jeopardized by unseasonable frosts; in other words, not until the rewards of the season might be wiped out in a single night, that the orchardists of this country took up a serious consideration of the question of protecting their investment by raising the temperature through artificial means.

The present status of the practice in the Pacific Northwest is set forth in Farmers' Bulletin 401, U. S. Department of Agriculture. This discusses in an interesting way necessary preparation for frost prevention, materials for fuel, manner of distributing them in the orchard, together with quantity and cost involved in firing a given area. In the conclusions, the author says that there is no doubt that frost injury may be prevented by the use of fires and smudges, and that in the Pacific Northwest, wood and coal have proved to be the best fuel. In the Colorado valleys, notably the Grand Valley, it may be said that this is not the experience, rather, that kerosene, or crude petroleum, is now more popular than other forms of fuel. In the Rogue River Valley, Ore., it is stated that crops valued at from \$500 to \$1,000 an acre have been saved by a total expenditure of not more than \$15 to \$20 per acre. This sum is very much less than certain growers in the Grand Valley of Colorado have expended the past season in saving peach and apple crops. The toll in that region, where the period of frost visitation was three or four days in duration, coming at different times, amounted to as much as ten per cent of the value of the crop. The whole matter suggests a very interesting development in orcharding, and in passing, it may be said that the practice will unquestionably not remain peculiar and unique to the Rocky Mountain and Pacific Coast region, but will be attempted and possibly introduced in points farther east, notably the Mississippi Valley, where spring frost injury is, by no means, uncommon, and sometimes very destructive.

KNOCKING YOUR NEIGHBOR

The utility—to put it on the lowest basis possible—of this habit has been brought to mind recently by an accident arising out of correspondence with a nurseryman, in which one grower surprised another by making generous remarks about a third who was an active competitor of number one. This might seem to the selfish, short-sighted person as poor business. But looking into it more carefully the question arises, is not this good policy after all? To put honesty on the basis of a policy seems like holding a low ideal, but perhaps if one were to begin with that point of view he might continue to practice it automatically, which in its larger bearing and effect would certainly be most desirable.

The man who knocks a competitor actually lowers himself in the secret estimation of his hearers and depreciates

his own value accordingly. This is a fact, whether his hearers appear to be in accord with his sentiments or not. Down in the bottom of their heart they decry his methods.

Again, the habit of hitting the competitor is encouraged very frequently by reason of entire lack of acquaintance or of imperfect knowledge of the individual considered. As a person's associations widen, as knowledge of his business competitors increases, the personal element becomes a factor, for frequently friendships have grown and the word idly spoken, founded on hearsay or gossip, is withheld. For this reason, conventions have a very special value, not only in the political but the business world. For this and many other reasons we urged attendance at the Denver meeting, for there and at similar meetings that type of personal friendship are engendered which more than anything else tends to eliminate the habit of knocking the competitor.

SAVING MOISTURE

There are times during the season when we are not anxious to do this. In New York, we were anxious to lose moisture during the latter part of April and the first part of May, but the bung was driven tightly into the rain barrel early in June, and by the end of the month, we were very anxious to save moisture. An interesting article in the July 2d issue of the *Rural New Yorker* by Prof. F. H. King shows how moisture is lost and saved. The gist of his argument is that the earth mulch is the cheapest and most efficient way of saving moisture. Another interesting point made in this discussion is that cultivation may be too frequent. In other words, if a mulch is established and of sufficiently fine physical make-up, there is no virtue or benefit in continuing cultivation. The only value of added tillings rests in the fact that they may break up capillarity, which, when soil is unstirred, tends to establish itself.

THE COMMITTEE- MEN

President Stark has appointed the chairmen of the important committees of the American Association of Nurserymen. Their names appear elsewhere. It will be noted that the committee on Legislation has been divided, one to represent interests east of the Mississippi river; the other west of that river. Let us hope that they will pull together in the National affairs. The president has also formed three new committees, one on trade opportunities, another on civic improvements, and a third on membership.

NOVA SCOTIA APPLE CROP

Reports from the famous apple region of Nova Scotia indicate that the crop will be light this year. Although Gravensteins promised heavily in the early part of the season, the set was poor, and there will be comparatively a light crop of this famous variety.

INCORPORATED

The Teas Nursery Co., of Houston, Texas, has been incorporated with a capital of \$20,000. The incorporators are A. J. Condit, Edw. Teas and C. S. Preston.

Business Movements

CURETON NURSERIES ENLARGE

The Cureton Nurseries owned by James Cureton, Austell, Ga., have recently purchased another very fine tract of land long side of the famous Benscot Lithia Springs which they expect to plant mostly to flowers and ornamental trees and shrubs this fall and winter. This concern has also leased a very fine tract of forty acres out on the Lost Mountain ridge on which they have planted a commercial peach orchard that will come into bearing next season. As a sideline to their business Mr. Cureton for the last two years has been growing large quantities of garden plants for the retail trade and has met with unusual success, so much so until large blocks have been set aside for this purpose. He is a firm believer in sidelines with which to defray expenses during the growing season. This business was started eight years ago on a very moderate scale and now they have 106 acres in nursery and orchard.

PETERSBURG, VA.—The Arrowfield Nursery Co. has been incorporated with a capital of \$2500 to \$25,000. W. N. Roper is president; Edith M. Hutt, vice-president; W. N. Hutt, secretary and treasurer.—*Florists' Exchange*.

MONROVIA, CAL.—The business and good will of the Pioneer Nursery has been sold by R. H. Wilson to the Pioneer Nursery Co., A. Foster, president, Geo. H. Jackson, manager. The Pioneer Nursery is the oldest nursery in the county, having been established in 1876 by the retiring proprietor.—*Florists' Exchange*.

There is no real surplus of high-grade ornamentals in the nurseries of Massachusetts, or in fact, New England. The Framingham Nurseries have a nice stock of shade trees and evergreens, while at the New England Nurseries, Bedford, herbaceous perennials, shrubbery and evergreens predominate. The American Forestry Co. at South Framingham have several millions of seedling and transplanted evergreens and native shade trees, grown especially for forestry purposes. It is an exceedingly interesting plantation.

J. Woodward Manning is moving his principal nursery from Reading to North Wilmington, where he already has a large plantation of ornamental stock. He will, however, retain an office in Reading for the present.

J. W. Adams & Co. at Springfield are enlarging their plant and have completed a fine new storage cellar and packing house built of stone and cement.

MASSACHUSETTS NURSERYMEN ORGANIZE

The Massachusetts Nurserymen's Association was organized in the city of Boston, May 23d, and June 11th, 1910. The meetings were held at the State House and were attended by nearly all of the larger growers of nursery stock in the state. The State Board of Agriculture was represented by Secretary Ellsworth and Dr. H. T. Fernald, the latter being chief inspector of nurseries in Massachusetts. There are now one hundred and twenty-five nurseries in the state, ornamentals being the leading product. The following officers were elected:

President, W. H. Wyman, North Abington, Mass.; vice-president, Theo. F. Borst, South Framingham, Mass.; Sec.-Treas., A. E. Robinson, Bedford, Mass.; executive committee, J. K. L. M. Farquhar, Boston; Charles R. Fish, Worcester; W. B. Whittier, South Framingham; Julius Heurlin, South Braintree.

The annual meeting will be held in Boston, the first Tuesday in December.

Mr. A. E. Robinson, treasurer of the New England Nurseries, Bedford, Mass., sails for Europe on the New Amsterdam, July 19th. He will make a tour of the nurseries in Holland, Belgium, England and France, returning early in September.

Jackson & Perkins of Newark, N. Y., send out an attractive folder in the form of a reprint of an interesting description of a visit to French nurseries, made by Mr. George C. Perkins in 1909. The circular is attractively illustrated with cuts, showing various types of nursery operations in progress in the Angers district.

The Lang Floral & Nursery Co., 299 Main St., Dallas, Texas, has recently been established. They are successors to Lang, the Florist, of Dallas, Texas, and the McKinney Nursery Co. of McKinney, Texas.

INCORPORATED

On May 16th, the C. S. Harrison Nursery Co., perfected a new organization by forming a corporation to be known as The Harrison Nursery Co., and electing officers. Increase in volume of business during the last ten years has made it necessary for them to enlarge their executive force. Mr. E. H. Smith has been an able official in the employ of the C. B. & Q. R. R. Co. for a number of years. Mr. Mason is foreman in the field and has been in the nursery since he was fifteen years of age. Other stockholders in the institution are young men who have been connected with them for a number of years.

The Alvin Japanese Nursery Co., Houston, Tex., has been incorporated with a capital stock of \$225,000. Incorporators: C. L. Bradley, Joe M. Sam, S. Arai.

The D. Hill Nursery Co., of Elgin, Ill., is incorporating with a capital of \$25,000.

The Texas Nursery Company has purchased 1000 acres of land in Hildago county, for a cash consideration of \$40,000. This Company will grow oranges and grape fruit.

The Berryhill Nursery of Harrisburg, Pa., has bought 45 acres of land along the Johnstown road for nursery purposes.

Plans for Welland Park at Welland, Ont., that were submitted by Brown Brothers Company, Nurserymen, were accepted and the planting was done this spring. The plan provided for paths, lawn, shade trees and shrubbery beds.

The capital stock of the Sturgeon Bay, Wis., Orchard and Nursery Company has been increased from \$20,000 to \$40,000.

Mayor Bunday of Ashland, Wis., a well-known Twin City nurseryman, has acquired about 1000 acres of land on Sand Island, which he will devote to fruit growing.

Will B. Otwell of Carlinville, Ill., for twenty years engaged in the nursery business, has sold his stock and will devote all of his time in the future to his publication *The Farmer Boy*.

The King Thurston Nursery Company of Kalispell, has filed with the Secretary of State notice of its change from the nursery to the realty and kindred business and its increase of capital stock from \$10,000 to \$50,000.

San Francisco, Cal.—Wm. H. Oakes, proprietor of the International Eucalyptus Nurseries Company; liabilities, \$10,768.15; assets, \$2,247.

Application was made in the Superior court on May 26 for a receiver for the Hyde Park Nursery Company, of Muskogee, Okla.

ENGLISH NOTES

Messrs. Fromow & Sons of Windlesham, Surrey, England, who are very extensive growers of roses and superior nursery stocks of all kinds, report under date of May 7th, 1910—

"So very much depends upon the weather obtaining here during the summer, as to what progress the plants themselves make. At the present time the outlook is not very favorable, but we are hoping for better weather. The spring has been thus far very cold and wet and we are experiencing frost almost every night, which may very considerably diminish our stocks. And we gather that this kind of weather is obtaining all over the country. This will to a very large extent influence the prices."

FROM MUKDEN, CHINA

"The shipment that you consigned to me under date of February 17th, arrived here on the 27th of May. Long delays were caused by the avalanches on the Pacific Coast and to a delay in trans-shipment at Kobe. In spite of these delays, the stock arrived in excellent condition and at the present time, fully two-thirds have developed strong buds and shoots."

Ellwanger and Barry, Rochester, N. Y., were the recipients of the above satisfactory letters that will prove interesting to all American Nurserymen.

MEETING OF THE SOUTHERN NURSERYMEN'S ASSOCIATION

The Southern Nurserymen's Association meets in its twelfth annual session at Knoxville, Tenn., August 24th, 25th and 26th, 1910, and the nurserymen of the south, especially, along with the interested fruit growers are urged to attend and help make this the most profitable meeting yet held. This association prides itself in discussing a class of subjects that are altogether practical.

The meeting this year will be held in Morrill Hall, on the grounds of the University of Tennessee, where extra facilities toward making the meeting a success are to be had.

While the Association meets principally for business, yet, the entertainment committee, composed of Knoxville men, has planned social features which will be heartily enjoyed. An especial invitation is extended to the entomologists of the different southern states to meet with the Association.

Membership dues which are \$2.00 per year, should be sent to A. I. Smith, secretary and treasurer, Knoxville, Tenn.

Headquarters for members attending will be at the Appalachian Hotel.

Officers of the Association are: R. C. Berckmans, Augusta, Ga., president; W. A. Easterly, Cleveland, Tenn., vice-president; A. I. Smith, Knoxville, Tenn., secretary and treasurer.

ADVERTISING DID IT

"We are pleased to say that our advertisement has brought us much correspondence and you will do us a favor by not publishing it any longer as the stock has all been disposed of."

Detroit, Mich.

E. FERRAND & SON.

APPLE CROWN-GALL IN THE NURSERY AND ORCHARD*

GEORGE G. HEDGECOCK

Pathologist U. S. Dept. Agriculture

The apple crown-gall, including hairy-root, is the most prevalent disease of apple trees in the nurseries of the United States. Owing to the continued agitation due to the enforcement of laws to prevent the dissemination of the disease it has become one of the best known diseases. It is found in nurseries in varying intensity in all sections of the country where nursery stock is grown. It is essentially a nursery disease, and its importance in the apple orchard has evidently been greatly overestimated. A strict enforcement of our State nursery inspection laws would result in the destruction of more than a million trees annually.

The writer has studied the various forms of the disease in nursery and orchard experiments for a period of seven years; this study has included especially the effect of the disease and its control and prevention. In these experiments there were grown, under the personal supervision of the writer, 143,763 apple trees in nursery plots, and 2,077 trees in orchard plots, in a number of localities in Nebraska, Kansas, Arkansas, Missouri, Iowa, Illinois, Virginia, and the District of Columbia. The description of these experiments with the full results will be published in a bulletin from the Bureau of Plant Industry, now in press. A few of the most important conclusions are given in this paper.

In former addresses to this Association the writer has described two forms of crown-gall; the soft and the hard; and four forms of hairy-root: the simple, the woolly-knot, the broom-root, and the aerial. More recent investigations by the writer and others—Smith, Townsend and Brown, of this department—tend to show that ultimately all these forms of disease will be proven to be manifestations of one disease, and related to the crown-gall on grapes, raspberries, blackberries (B. P. I. Bulletin 131, Pt. III, 1908), the stone fruits, and possibly the quince. In case of the soft and hard forms of crown-gall the relation is undoubted. The soft galls either rot away and disappear or become hard galls as they grow older. Hard galls often develop into the woolly-knot form of hairy-root, which has been shown by the writer to be identical with the aerial knots on apple and quince trees (B. P. I. Circ. 3, 1908). It is easy to see that the same stimulus acting on young cells under the bark might result either in increased callus or gall production from ordinary cells, and in increased production of roots or root-buds where incipient root centers are affected. In the former case galls would result, in the latter, some form of hairy-root.

Crown-gall is a bacterial disease and is contagious through the soil in wounds. No proof has been found that it can enter the tissues of apple trees without wounds of some sort. There is reason to believe that in case of the aerial form of

hairy-root, the woolly-aphis is concerned in the spread of the organism causing it. Aphis galls must not, however, be confused with crown-gall, since they arise directly from the stimulus accompanying the bite of the insect. In root-grafting the extensive cut surface in the union favors the entrance of disease germs.

In our nursery experiments with root-grafted trees, crown-gall invariably developed on trees in the nursery rows in considerable amount the first year, but not to any extent the second and third years. On the other hand, hairy-root forms develop chiefly the second and third years. The total per cent of diseased trees was considerably less the second year, and decreased further the third year. Some of the galls developed hairy-root from their surface; others rotted away and the trees recovered. The decrease of disease the second and third year upon close analysis showed two results: 1. A recovery of trees from milder forms of disease. 2. Although the disease was readily communicated to root grafts the first year, it did not spread to an appreciable extent to healthy trees in the nursery rows the second and third years.

The effect of the disease on trees in the nursery rows varied. In some cases of trees badly diseased with the simple form of hairy-root there was a pronounced stunting effect on the growth. In other cases with woolly-knot forms an increased growth and apparent vigor of the trees resulted. On the average, however, trees diseased with either crown-gall or hairy-root were very slightly smaller, but did not show any marked difference in the foliage.

Experiments with orchard trees were carried out in two orchards till the trees were eight years old. These as a consequence furnish data only upon the effect upon the growth of young trees, and no data in our experiments were obtained upon the effect upon bearing trees as to whether diseased trees bear earlier than healthy ones, or whether they bear as well.

In our orchard experiments a considerable per cent of trees diseased with crown-gall recovered entirely from the disease; many others developed hairy-root of the woolly-knot form from the surface of hard crown-galls. A few of the healthy trees became diseased. The results as a whole from the orchards showed plainly two facts: 1. More trees recovered from the disease than became diseased. 2. The disease spread very slowly, if at all.

Careful measurements of healthy and diseased trees in the experimental orchards showed that the effects of the growth on the diameter was very slight, and as follows: in six years' growth in the two oldest orchards the healthy trees averaged six one-hundredths of an inch greater in diameter than those diseased with hairy-root, and twenty-nine one-hundredths of an inch greater than those diseased with crown-gall. The outward appearance of the trees,

*Paper printed in the Proceedings of the American Association of Nurserymen for the meeting held in Denver, June 8 to 10, 1910.

branching, leaves, etc., did not perceptibly differ. The largest tree in the orchard, as well as the smallest one, were trees diseased with crown-gall, and of equal size with the healthy ones when set out. The largest tree developed hairy-root from hard crown-galls, but the smallest did not.

About three per cent more of the diseased trees died than of the healthy ones in our two oldest orchards. In a younger orchard, planted in a very dry season, a greater per cent of trees diseased with hairy-root lived than of healthy ones; and a greater per cent of healthy trees than of those diseased with crown-gall.

From this it appears that the effect of crown-gall upon orchard trees is slight and has been greatly over-estimated; and further, that the disease does not spread rapidly through an apple orchard, as has been asserted by some.

No method of entirely eliminating the disease in the nursery has been discovered. The per cent of healthy trees can be greatly increased by carrying out the following suggestions: 1. Select roots and scions for root-grafting, or seedlings and buds for budding from healthy plants. 2. Carefully fit the scion to the root in root-grafting, and wrap tightly and firmly the cut surfaces in the union, especially the lower end of the scion. 3. Avoid the long storage of root-grafts, unless in cold storage, since the over-production of callus favors the entrance of the disease. 4. Avoid wounding trees in the nursery row with the hoe or cultivators. 5. Avoid planting in wet, heavy soils.

If crown-gall on apple trees were the only disease to be inspected, the act of inspection is hardly necessary, unless it may be shown later that the disease greatly lessens the fruiting of trees in the orchard and affects the growth of older trees in the orchard differently from that of younger ones.

On the other hand, crown-gall under certain conditions, severely injures grapes, raspberries, and probably peach trees; and under other conditions has little effect upon them. Where these fruits are extensively grown crown-gall might be communicated to them from diseased apple trees to their detriment. It is plainly the duty of the inspector to keep out plants diseased with crown-gall from such sections.

Obituary

E. H. REYNOLDS

E. H. Reynolds, the oldest nurseryman in the state of Michigan, died at his residence in Monroe on Friday, July 22d, at the age of ninety-two. Mr. Reynolds was born in Binghamton, New York. He moved to Michigan at an early age and commenced growing nursery stock at Monroe sixty-one years ago. The E. H. Reynolds nursery was later combined with the Lewis nursery of Monroe under the firm name of the Reynolds & Lewis nurseries. In 1889 Mr. Reynolds retired from business and his interests were acquired by D. D. Winkworth. The nursery at this time was incorporated and has since been known as the Michigan Nursery Company. Mr. Winkworth has been president and manager since 1889.

Mr. Reynolds was always an active and influential nurseryman. He was interested in church and politics and held many important offices in Monroe. He was one of the founders of the Republican party under the oaks at Jackson, Michigan.

J. W. COGDALL PASSES AWAY AT SPRINGFIELD, ILL.

Died at 8 A. M. Wednesday, May 11, 1910, at his home one and one-half miles east of the city, J. W. Cogdall, aged 58 years.

The funeral will be held at 2:30 o'clock tomorrow afternoon at Kumler M. E. church. Interment will be made in Oak Ridge cemetery.

Mr. Cogdall was born in Menard county and had resided in this county for the last seventeen years. He was a well-known fruit grower and had many friends in this locality. Mr. Cogdall was a member of Kumler M. E. church. He has been ill for several months.

Deceased is survived by his wife, Mrs. Priscilla Cogdall; two sons, Dwight and William; two daughters, Mrs. Minnie Frederick and Miss Elma Cogdall; two brothers, George of Chicago and Edward of Petersburg, and one sister, Mrs. N. P. Nelson of Petersburg.

FALSE BRANDING OF FRUIT PACKAGES

If the following decision with reference to the printing of geographical names on packages of food, under the pure food and drug law, does not catch the eye of certain local dealers who have been known to buy up discarded packages, fill them with grapes, apples, peaches, melons, etc., and sell them on the reputation of the brand which belongs to others, it will be a losing game for those caught playing it, as out of more than 3000 cases of violation of the food laws, the Government has lost only three.

The board holds that the terms "Rocky Ford" and "Indian River" have not become sufficiently generic to indicate styles, types or brands of melons and oranges, respectively, but that these geographical names are only properly applied to the product of the restricted area for the melons which are grown in or near Rocky Ford, and for the product grown in or near the Indian River. Inasmuch as the term "Rocky Ford" has thus been associated with a melon of peculiar excellence of a certain geographical locality, the board holds that it is unlawful to sell in interstate commerce melons not grown in the Rocky Ford district as "Rocky Ford Seed" melons. The terms are nearly alike, the intent is to deceive, and the law provides that a label should not be false or deceptive in any particular.

MARKET FOR AMERICAN APPLES IN BERLIN

That there is a promising market for high class American fruit in the leading German cities, Berlin in particular, is the opinion of F. A. Waugh, recently expressed in the *Country Gentleman*. He describes the manner in which native and imported fruit is handled, and characterizes the whole as exceedingly primitive and backward. Although the price secured by the better grades is comparatively high it would appear that the market for this class is comparatively limited. He believes that an "enterprising" American agent could however do a good deal toward overcoming the defects of the local marketing machinery, but even as things stand there is a big market for American fruit, capable of taking quantities of our product at profitable prices.

NOTES ON EARLY, HARDY, SPRING, FLOWERING SHRUBS

By JOHN CRAIG, Ithaca, N. Y.

THE FORSYTHIAS

The spring procession of flowering shrubs is headed by forms of Forsythia (Golden Bell), of which *Viridissima* and *Suspensa* are leading examples. One of the handsomest displays of the latter which I have seen was on view here in Ithaca from the latter part of March until well into April as a living curtain of gold overhanging a rocky embankment several hundred yards in length, forming one boundary of a street which cuts its way along the somewhat precipitous face of a rocky hillside below Cornell University. The plants set out some six or seven years ago have now become thoroughly established, many of the tips having layered themselves naturally, there being adequate moisture to encourage rooting. The outer face of this rough, natural terrace was festooned with this beautiful hanging mass of gold in blossom for an unusually long period, owing to the peculiar character of the spring. The Forsythias always bloom most freely following a winter which is characterized by small fluctuations of temperature. Warm periods are likely to cause early development of buds which are frequently killed or injured by subsequent cold. The past winter was most favorable in this locality for full flowering, and the Golden Bell, as it is called, developed splendidly and received full appreciation this spring. The more upright form—*viridissima*—is desirable for mass effects and exhibits few or none of the trailing characteristics of *suspensa*. The plants are easily propagated by cuttings or layers.

THE CARAGANAS

These belong to the family of legumes and are mostly of East European origin. The common name—Pea tree—indicates their leading characteristics of blossom and leaf. The yellow, pea-like blossoms appearing with the opening leaves early in spring, are succeeded by slender pods containing small black seeds not unlike sweet peas. The principal form is *C. arborescens*, a small, round-topped, shrubby tree, usually exhibiting several stems, is perfectly hardy in all localities up to 42d or 43d parallel of north latitude. In fact, this shrub is reliable even in Manitoba. Other forms are dwarfer and some are larger flowered than *C. arborescens* described above as the type. The easiest way to propagate them is to grow them from seed, and this can be done with great readiness. The yellow pea-like blossoms appear with or soon after the leaves.

THE JAPANESE QUINCE

This old door-yard favorite is becoming less popular, largely on account of the fact that it seems to be a favorite host for the San Jose scale. On the other hand, the two types mentioned above—*Forsythia* and *Caragana*—are not infested to any serious extent. It is usual for hedge pur-

poses it is true, but when grown in this form it is most difficult if not impossible to free it from scale when such infestation occurs. The magenta or pinkish red blossoms appear before the leaves but their beauty is considerably diminished by the ungainly outlines of the bush. The old wood should be cut out regularly.

A BEAUTIFUL CRAB

Following the quince we have an attractive array of flowering crabs, of which the most desirable form in my estimation is the native variety known as Bechtel. This combines beauty, hardiness, and ease of propagation with a very extended range of adaptation.

Two or three trees on the Cornell campus were rarely beautiful the past spring, exhibiting all the beauty of a double prairie rose combined with the stature of a small tree.

THE NATIVE THORNS

Among the thorns we have a group of unusual value, owing to the fact that they are practically as handsome in fruit as in flower. One of the drawbacks to their cultivation is that they provide such a congenial host for the codling moth. They are, however, more immune to San Jose scale than most other forms of the rosaceous group. Among the best from the standpoint of attractive characters of flowers and fruit are *Crataegus coccinea* (Scarlet Thorn) flowering in April and May; *C. mollis* with showy flowers and bright green leaves. The fruit is particularly attractive and ripens in September. The Cockspur *C. crus-galli* is recognized by its horizontal branching habit. It runs into several varieties, all very attractive. The English Hawthorne in single and double flowered forms is fairly hardy, but unlike the native types falls an easy victim to San Jose scale, besides being attacked by pear blight in addition to one or two fungous diseases.

PRICE OF CHERRIES AT NEWARK, N. Y., CANNERY

Prices are as follows, June 22, 1910:

Opening prices for sour cherries, currants and gooseberries will be as follows:

For Louis Phillippe cherries, first quality—six cents per pound.

For all other varieties sour cherries, first quality five and one-half cents per pound.

For red currants, first quality—large varieties—four cents per pound. Small varieties—three and one-half cents per pound.

For gooseberries, first quality—large varieties—four and one-half cents per pound. Small varieties—four cents per pound.

All fruit to be delivered at our factory in good merchantable condition; and inferior quality fruit, if accepted at all, will be at a reduced price.

No produce of any kind received on Saturday.

Terms: Cash on delivery. Prices subject to change without notice.

REVIEWING THE YEAR 1909, WHAT HAVE WE ACCOMPLISHED?

J. R. MAYHEW

Delivered as a Presidential Address before the Texas Nurserymen's Association at Dallas.

It is well for us in the mad rush of life to stop long enough at least once each year to look ourselves squarely and earnestly over, to ponder well, past and present policies, to take a careful invoice of our resources of mind and heart as well as of goods and chattels. Few of us enjoy the ordeal, for when the x-ray of sober thought is turned into our lives, conscience tells us in no uncertain terms that we have left undone many things we should have done, and done many things we should not have done. So it is with us in all activities of life, business being no exception.

ACCOMPLISHMENT

Reviewing the year, 1909, what have we accomplished, what have we failed to accomplish? If we consider the year from a financial view-point alone, I judge few if any of us have added to our surplus fund, still we have no cause for regret here, for the season has been more fruitful than even the greatest optimist among us had hoped. The unprecedented drouth of the year cost us thousands of dollars, but the lessons wrought therefrom are unquestionably worth the price. We learned more about conservation of resources during 1909 than we would have known under ordinary conditions in a life time. We learned that with ten inches of rainfall, coupled with intense cultivation, we could grow fairly good trees, and this lesson alone was worth the price to say nothing of the lesson of patience. Oh, how we longed for rain, waited, prayed maybe, but kept the plows going, and though the rain failed to materialize, intense cultivation kept our stock growing. We continued our salesmen on the road regardless of their cries of woe, regardless of the fact that Texas was burning up and there was seemingly no possibility of making collections, and who will say we made a mistake? Sales probably cost us more than formerly, but the man who had the nerve to stay with the ship, has made the harbor. Collections, the result of high prices on all agricultural commodities, have been about as good as usual, and my prediction is that the end of the nursery year, May 1st, 1910, will find Texas nurserymen in good shape financially, and that, having lived through the strenuous year just ended, we are stronger and more capable business men.

PAST POLICIES

Reviewing the year from a standpoint of policy, dull indeed is he who fails to note the upward trend. While there are many reforms yet needful, happy am I to say the nurseryman of today is striving for higher ideals in business life than ever before, and is attaining these ideals. Go into any community, you will, and you will find the nurseryman a leading spirit therein, loved and respected by his people, doing not only his duty as it pertains to his own business, but giving his time and his money for the betterment of

mankind. Fortunate, indeed, is that community where lives a thoroughgoing nursery concern, for, in my opinion these interests are doing more unselfish work for the development of Texas today than is dreamed of by the people generally. Aside from this, and in addition to the public spirited work you are doing for the country generally, there is no avenue of trade where your dollars do not find their way. From the highest to the lowest—all are benefitted by and through your business. I say, without fear of contradiction, that, as it pertains to society generally, there is not at this time nor has there ever been, any direliction on your part.

GENEROUS RIVALRY

During past years the spirit of rivalry has been characterized by unbecoming behavior, one toward the other maybe, but today there is abroad in the land a spirit of brotherly love and kindness that has put to flight all ill feeling. We have learned the truism that our success or failure is akin, and while competition between us is as keen as a two-edged sword, like brethren we are dwelling together in unity. I had the pleasure of attending the Southern Association at Huntsville, Alabama, since last we met, and for a week afterwards I felt as if I had been in attendance on a Methodist camp-meeting. After all, why should not this spirit of fellowship dominate our lives? Do not fear overproduction, it is the most valuable asset you possess.

In reviewing the past year, I trust you will not think me presumptuous if I refer to questions of policy that, in my opinion, should be corrected. These questions are of vital interest to us all, for they are either right or wrong and, as such, influence our affairs. One of the important subjects for your consideration at this time is the policy of replacing stock at less than full value. This question has been prominently before several associations during the past year and I trust the discussions here today will determine what is the wise course for the nurserymen of Texas to pursue. If its practice is conducive to greater confidence between the nurseryman and the planter, if from every viewpoint, its influence is good, if it is right from principle and is making us money, it should be continued, otherwise we should have the courage to abolish it. This question is to be discussed by gentlemen of wide experience, whose usefulness covers many years in the nursery business, and who know something of its influence for good or evil. I believe that the principle of a thing is either good or bad and of dealing with it along these lines.

Another suggestion I beg to submit, that you appoint at this meeting a committee on publicity, whose duty will be that of keeping the nursery interests of Texas before the public in a favorable light.

THE FORESTS OF THE UNITED STATES: THEIR USE*

How many are aware that the industries of the nation which subsist wholly or mainly upon wood pay the wages of more than 1,500,000 men and women. "The industries which use wood wholly or mainly in manufacture represent an investment of over \$2,250,000,000.00 and yield each year a product worth nearly \$3,000,000,000."

The following quotations from this interesting bulletin present the forest situation in a very striking attitude in relation to the agriculture and manufacture of the country at large.

WHAT FORESTS DO

Our industries which subsist wholly or mainly upon wood pay the wages of more than 1,500,000 men and women.

Forests not only grow timber, but they hold the soil and they conserve the streams. They abate the wind and give protection from excessive heat or cold. Woodlands make for the fiber, health, and happiness of each citizen and of the nation.

The fish which live in forest waters furnish each year \$21,000,000 worth of food, and not less than half as much is furnished by the game which could not exist without the forest.

WHAT WE HAVE

Our forests now cover 550,000,000 acres, or about one-fourth of the United States. The original forests covered not less than 850,000,000 acres.

Forests publicly owned contain one-fifth of all timber standing. Forests privately owned contain at least four-fifths of the standing timber. The timber privately owned is not only four times that publicly owned, but it is generally more valuable.

Forestry is now practiced on 70 per cent of the forests publicly owned and on less than 1 per cent of the forests privately owned, or on only 18 per cent of the total area of forests.

WHAT IS PRODUCED

The yearly growth of wood in our forests does not average more than 12 cubic feet per acre. This gives a total yearly growth of less than 7,000,000,000 cubic feet.

Nearly all our native commercial trees grow much faster than those of Europe. We already grow post timber in twenty to thirty years, mine timber in twenty-five to thirty-five years, tie timber in thirty-five to forty years, and saw timber in thirty to seventy-five years.

We have 200,000,000 acres of mature forests, in which yearly growth is balanced by decay; 250,000,000 acres partly cut over or burned over, but restocking naturally with enough young growth to produce a merchantable crop; and 100,000,000 acres cut over and burned over, upon which young growth is either wholly lacking or too scanty to make merchantable timber.

WHAT IS USED

We take from our forests yearly, including waste in logging and in manufacture, 20,000,000,000 cubic feet of wood.

We use in a normal year 90,000,000 cords of firewood, 40,000,000,000 board feet of lumber, 118,000,000 hewn ties, 1,500,000,000 staves, over 133,000,000 sets of heading, nearly 500,000,000 barrel hoops, 3,000,000 cords of native pulp wood, 165,000,000,000 cubic feet of round mine timbers, and 1,250,000 cords of wood for distillation.

WHAT IS WASTED

Forest fires burn over millions of acres and destroy billions of feet of timber annually. The young growth destroyed by fire is worth far more than the merchantable timber burned.

One-fourth of the standing timber is left or otherwise lost in logging. The boxing of longleaf pine for turpentine has destroyed one-fifth of the forests worked. The loss in the mill is from one-third to two-thirds of the timber sawed. The loss in the mill product through seasoning and fitting for use is from one-seventh to one fourth. Great damage is done by insects to forests and forest products. An average of only 320 feet of lumber is used for each 1,000 feet which stood in the forest.

WHERE WE STAND

We take from our forests each year, not counting the loss by fire, three times their yearly growth. We take 36 cubic feet per acre for each 12 cubic feet grown; we take 230 cubic feet per capita, while Germany uses 37 cubic feet and France 25 cubic feet.

We invite by overtaxation the misuse of our forests. We should plant, to protect farms from wind and to make stripped or treeless lands productive, an area larger than that of Pennsylvania, Ohio, and West Virginia combined. But so far, lands successfully planted to trees make a total area smaller than Rhode Island. And year by year, through careless cutting and fires, we lower the capacity of existing forests to produce their like again, or totally destroy them.

The condition of the world supply of timber makes us already dependent upon what we produce. We send out of our country one and one-half times as much timber as we bring in. Except for finishing woods, relatively insignificant in quantity, we must grow our own supply or go without.

WHAT SHOULD BE DONE

We should stop forest fires. By careful logging we should both reduce waste and leave cut-over lands productive. We should make the timber logged go further by preservative treatment and by avoiding needless loss in the woods, the mill, the factory, and in use. We should plant up those lands now treeless which will be most useful under

*Circular 171 U. S. Dept. of Agr.

forest. We should so adjust taxation that cut-over lands can be held for a second crop. We should recognize that it costs to grow timber as well as to log and saw it.

We should continue and perfect, by State and nation, the preservation by use of forests already publicly owned; and we should extend it to other mountain forests more valuable for the permanent benefit of the many than for the temporary profit of a few.

For each million acres of forest in public ownership over 4,000,000 are privately owned. The conservation of public forests is the smaller task before the nation and the States. The larger task is to induce private forest owners, which means 3,000,000 men, to take care of what they have, and to teach wood users which means everyone, how not to waste.

If these things are done, they will conserve our streams as well as our forests. If they are not done, the usefulness of our streams will decrease no less than the usefulness of our forests.

AMERICAN CRANBERRY GROWERS TO EDUCATE HOUSEWIVES

The public mind is to be disabused of the idea that cranberries should be eaten only with poultry, and \$250,000.00 will be expended during the next five years by the American Cranberry Growers' Advertising Agency to teach the American and English housewife how cranberries should be cooked. Each grower is to be taxed a certain percentage of his yield in order to carry on the work of making his product a regular table dish.

The cranberry crop of last year amounted to 600,000 barrels valued at from \$6 to \$7 a barrel, and was grown chiefly in New Jersey, Massachusetts and Wisconsin. No effort will be made to market the American cranberry in France and Germany as in both countries a prohibitive duty of \$19.35 a barrel is levied.

Editor NATIONAL NURSERYMAN,
Rochester, N. Y.

Dear Sir:

We feel we can easily look at the inspection question from the orchardist's standpoint as well as the nurserymen's, since we have a little over one-fourth of a million dollars worth of fruit orchards ourselves with our associates in Colorado and Utah.

The main objection we make at present is the fact that many of these entomologists lack good, old-fashioned backbone. What we mean by this is that they appoint as inspectors old fogies, who do not know the dreaded pests when they see them, and some of them take large budded apple trees for crown gall.

When conditions of this kind are put up to the entomologist, they fear they will take a stand against their men, so they make evasive answers, which is unsatisfactory, from the orchardist's standpoint as well as the nurseryman's. What should be insisted on, in our judgment, is more backbone among the state entomologists, and men should be appointed who are not afraid to admit their fault when they are proven to be wrong. In fact, only by such co-

operation with the orchardists and the nurserymen can the interest of the orchardist be protected, and we know this is not being done at the present time.

THE WINFIELD NURSERY CO.,
Per J. MONCRIEF

Editor NATIONAL NURSERYMAN Co.,
Rochester, N. Y., U. S. A.

Dear Sirs:

We have our troubles and plenty of them,, but nurserymen do *not* require to take out a license in this country, and the license referred to is solely for the sale of poisonous compounds used as insecticides, weed killers, etc., hence the opposition of the chemists who formerly had a monopoly of this sale.

We think it would be advisable to correct the wrong impression made in the minds of your readers.

Yours faithfully,
A. & C. PEARSON

SEEDLINGS OR SHRUBS. WHICH?

NATIONAL NURSERYMAN:

We would like to know what the rulings are as to duty on Evergreen Seedlings.

We imported some this spring and they were shipped in bond to Kansas City. The custom officer passed them free; then a few weeks afterwards we received word that the office in New York had ruled that they were not Evergreen Seedlings, but Evergreen Shrubs, and we had to dig up 25 percent duty on them.

The shipment consisted principally of Norway Spruce, Austrian, Scotch and White Pines and Arborvitæ. We would like to know whether they are seedlings or shrubs.

Respectfully,

KANSAS CITY NURS.,
GEO. H. JOHNSTON

ANSWER

NATIONAL NURSERYMAN:

The enclosed letter has been sent to me by Mr. Pitkin. Evergreen Seedlings were taken from the dutiable list and placed on the free list at the time that the Tariff Act was in conference. The Act says: "Evergreen Seedlings Free." In spite of this the government acting through the New York appraisers have collected duties at the rate of 25 percent *advalorem* on all Evergreen Seedlings. These payments have been protested and the matter is now up for a Judicial Decision which I understand has not yet been rendered. In the meantime the government is trying to find out what is meant by "Evergreen Seedlings" but the nurserymen knew what they meant when they defined them by the age limit of three years old or less.

As soon as there is a definite decision on the above point I will inform you so that the trade in general may be kept posted.

Yours truly,
IRVING ROUSE

Correspondence

NURSERYMEN'S KINDNESS ACKNOWLEDGED

The following communication from the mayor of Loveland, Colo., in acknowledging the contribution of the visiting nurserymen on behalf of the little boy, the unfortunate victim of the automobile accident, recognizes the hearty generosity of the visitors and shows that their kind act was received by a woman who would deeply appreciate the thoughtfulness which prompted the gift, and who would benefit by the money consideration itself:

Loveland, Colo., June 27, 1910.

Mr. J. W. Hill,

Des Moines, Iowa.

Dear Sir:

Your letter containing draft for \$135.00 received and we should have replied sooner. I turned the draft over to Mrs. Walker, mother of little Scott, and she wished me to thank you for your kindness. The little fellow died on Monday morning following the accident. The woman is poor and has a number of little children to support. Henderson who was running the car paid all expenses. We all, very much appreciated the thoughtfulness of the visitors as we have had a number of inquiries regarding the little boy.

Yours very truly,

J. W. McMULLEN,

Mayor Loveland, Colo.

A CORRECTION

Sir:

We would like to draw your attention in a friendly way to a paragraph on page 620, June issue, stating that in England, nurserymen are obliged to take out a license to do business!!

This is quite a mistake. No license whatever is required by nurserymen, truckers, florists, fruit growers, farmers, or any allied traders. Neither have we ever heard any suggestion as to the advisability of such license.

We can trace, however, how your error arose. In April, 1909, the "Poisons Act" came into force, and this Act requires that all dangerous horticultural poisons such as arsenate of lead, arsenic, nicotine, etc., should be sold either by qualified druggists, or else by dealers who have taken out a poisons license.

The object of this license is, of course, to keep track of stores who sell poisons. Such licensed dealers have to observe various regulations as to marking goods "poisonous," and selling them to trustworthy people, etc., etc.

We may claim to have some authority on the subject, as we are the oldest (and we believe the largest) Insecticide house of our kind in Europe. We are sole British agents for Swift's Arsenate of Lead (which is sold under the Poisons Act).

Yours very truly,

STRAWSON & COMPANY,

By W. J. STRAWSON.

London, Eng.

Fruit and Plant Notes

NEW FOREIGN SEED AND PLANT INTRODUCTIONS

In the inventory of seeds and plants imported from July 1st to September 30th, 1909 (Bull. 176, U. S. Bureau of Plant Industry), some introductions of unusual interest are pointed out.

Of especial interest and problematic value is a collection of peach, apricot and cherry seeds from the Himalayas (Nos. 25894-96).

The great value of a variety of cherry, which is hardier in fruit bud than other cherries, is conceded by the horticulturists of the Northwestern States. Those who are breeding or experimenting with cherries will therefore be interested in the introduction of *Prunus tomentosa* (No. 25880), which has been especially recommended by Professor Macoun, of the Experimental Farm at Ottawa, Canada. Trees of this species have been placed in the Upper Mississippi Valley Plant Introduction Garden at Ames, Iowa, for further trial and propagation.

The oriental *Myrica nagi* (No. 25908), an extremely interesting fruit plant, whose dark, wine-colored fruits are exceedingly ornamental, has not been given the attention which it deserves. There seem to be a number of varieties of this fruit, and, although it is a slow-growing tree and late coming into bearing, it is deserving of a trial in California and northern Florida.

An importation of seeds of the "Queensland nut," *Macadamia ternifolia* (No. 25845), calls attention to the possibilities of cultivating this plant in parts of California and southern Florida. Trees are now growing in southern California which have borne nuts for the past two seasons. In Sidney the nuts are much liked and retail for 1s. per lb.

DUPLICATING NAMES

One of the greatest mistakes in the nursery and seed business, is the attaching of the same name to several different kinds of fruits, vegetables or other goods that are handled by the same firm.

One little matter of this kind has just been forcibly brought to my attention by the receipt of a letter from a customer in New Jersey who complains that he ordered "Oswego" style of berry baskets and crates and got instead of four Oswego Berry crates and 500 baskets—a berry crate and 500 "Oswego" strawberry plants. Now it happened in this way,—we fill very few orders for berry crates and baskets but we are sending out "Oswego" strawberry plants every day, as it is a very popular variety with me. The girl who booked the order and wrote the tag, had never heard of Oswego berry baskets and crates. Only the other day, we sent 250 Columbian raspberry plants to a party in Syracuse when he really ordered 250 Columbian mammoth asparagus plants. One of our specialties is the Plum Farmer raspberry and these usually go in to nine-tenths of all the orders that go out. A few years ago we run on to a valuable new oat and some one suggested the name "Plum Farmer" for this new oat and it was so named. Well the amount of trouble and mistakes this caused us was considerable and we simply had to drop the oat, as the profits on handling them were more than offset by the losses we sustained in having to re-fill orders that got the wrong article. There is a long list of duplicate names of fruits, and in future, it would be well for introducers to change the names when by chance a new variety they got hold of has attached to it a name that is now claimed by some well known fruit or vegetable. We have the Cardinal raspberry and a strawberry by the same name,

the Wilson blackberry and the Wilson strawberry, the Early Harvest blackberry and a strawberry by the same name. And there are others.

L. J. FARMER.

It seems to us that one of the radical mistakes lies in the careless, illogical and inappropriate naming of plants. A good example is that given by the writer himself when at the suggestion of some person he named a new oat "Plum Farmer." Now it would take a long stretch of the imagination to associate an oat with such a name, and we do think that names ought to carry with them something which might suggest an association. We heartily agree with the idea that growers should be careful not to duplicate names of varieties, even though the fruit named belongs to an entirely different class from the one already bearing that name, for such practice is bound to result in confusion.

We would suggest that before naming new varieties growers or introducers should consult the fruit lists of the American Pomological Society which give the leading varieties in cultivation and their synonyms. Duplicates may be largely avoided by observing this precaution.—EDITOR.

ANNOUNCEMENT

Oudenbosch, Holland, June 1st, 1910.

We beg to announce that after June 15th, 1910, our American trade will be in the hands of Mr. Leonard Oorthuys, Poughkeepsie, New York.

Mr. J. Meerkamp van Embden will continue to represent us in the states of California, Oregon and Washington. His address will be Thornton, San Joaquin Co., California.

We earnestly hope you will continue to favor us with your esteemed patronage, and we assure you that same will be given our very best care and attention.

Respectfully yours,

ALMA NURSERIES.

Proprietors { U. J. Heerma Van Voss
H. A. M. Swellengrebel

Quiz Column

EDITOR NATIONAL NURSERYMAN:

Please inform us how Weeping Mulberry and Catalpa Bungei are propagated by grafting. State best time, whether early or late, and any special directions which the grafter should have in order to make a success of the operation.

ANSWER I

Both the Weeping Mulberry and Catalpa Bungei are grafted from 5 to 6 feet in height on the tops of straight stems.

For the Weeping Mulberry we use the Russian Mulberry, *Morus Tartarica* and for the Catalpa, *Catalpa speciosa*.

These trees should be cut down severely for at least two years until they throw up a strong leader in one year, 5 to 7 feet in height, of proper size for growing. The scion is then inserted in the usual way with the side or lip graft firmly tied in and covered with grafting wax.

The best time for grafting is about the first of May whenever the buds begin to start and the weather is warm enough to work the wax.

W. & T. SMITH COMPANY,
Geneva, N. Y.

ANSWER II

"Weeping Mulberry and Catalpa Bungei are grafted in the spring in the nursery rows at the time the sap is starting to flow, or at the time when the buds have broken and the stock has made about one-quarter or one-half inch growth.

They are both worked by side grafting. Both of these plants are of a pithy nature in the small wood and if such is used they should only be cut a little deeper than the bark.

The Mulberry should never be allowed to advance very far before grafting for they do not do, well as the milky sap flows too freely and the scion becomes what is known as 'Sap drowned.' "

THOMAS MEEHAN & SONS, INC.,
Germantown, Pa.

Note and Comment

THE WHITING NURSERY COMPANY IN DIFFICULTIES

According to the *Rural New Yorker* the Whiting Nursery Company of Geneva has been experiencing an unusual amount of difficulty in making deliveries in Orleans county where it appears that purchasers strenuously objected to the class and quality of goods delivered. The operations of the Company have resulted in a large crop of suits instituted by farmers, and which according to latest information were still pending. Meantime a delivery agent was assiduously endeavoring to make successful deliveries and collections.

A large shipment of oaks, roses, fruit trees and other stock from Europe to LaCrosse, Wis., awaited for several days in that city the arrival of Entomologist and Chief Inspector J. G. Sanders from Madison. A LaCrosse newspaper says: "The shipment arrived from Europe in fine condition and Inspector Sanders was notified immediately. Telegrams and letters have failed to bring him and park officials are getting uneasy, as the plants and trees should be planted."

The Wind River Nursery has been established near Portland, Oregon on the Columbia River by the forest service who intend to grow 1,000,000 forest tree seedlings there this season. The capacity will be increased later and many millions of forest trees will be grown annually. This is the only nursery of its kind in the Pacific northwest and nothing will be grown but forest trees.

NATIONAL SCHOOL OF FORESTRY

On April 22d a bill to establish a National School of Forestry at Nebraska City, Neb., to commemorate the noble work in behalf of the forestry interests of this country done by the Hon. J. Sterling Morton, was introduced in the federal legislature by Senator E. J. Burkett of Nebraska.

The bill aims to establish a school of forestry primarily for the purpose of spreading a knowledge of the best forestry practice and to stimulate the planting of trees. It carries an appropriation of \$250,000.00 and is supported by Secretary Wilson of the United States Department of Agriculture. This is certainly an appropriate memorial, and should meet with the undivided support of the congressional legislators. It is certainly a fact that the home of the late secretary of Agriculture is admirably adapted to the purposes of such an institution as a forestry school.

THE BOSTON ORCHID SHOW

The first great American Orchid show recently held in Boston was regarded as a great triumph on the part of the Massachusetts Horticultural Society, from an exhibition standpoint. About 500 species and varieties were displayed, and the demonstration was a liberal education in matters orchidean. Events such as this serve to make us all familiar with rarities that we have known by name only. The Society has practically decided to make the orchid show a permanent triennial exhibition.

R. W. Holbert, the nurseryman of Arcadia, has received an order for 40,000 Magnolia fig trees from the W. W. Wharton Company of San Antonio, Texas. These trees are for planting on grounds belonging to the latter company near San Antonio, where the planting of fig trees on a large scale is beginning this year.

TREASURER'S REPORT

Your Treasurer submits his annual report from June 10, 1909, to June 4, 1910.

RECEIPTS

June 10, '09	To cash on hand.....	\$3,853.79	
30,	Interest, bank account	\$32.62	
July 2,	Geo. C. Seager	290.00	
Dec. 31,	Interest, bank account	53.37	
Jan. 18, '10	B. E. Fields	25.55	
Mar. 3,	W. C. Reed	10.00	
May 25,	John Hall, Sec	36.00	
June 1,	John Hall, Sec	2340.30	
		\$2787.84	\$6641.63

DISBURSEMENTS

June 12, '09	American Printing Co., Exhibit Comm	7.75
	McGuire & Wood, Montana Laws	25.00
	Abner Hoopes, Tariff Comm. to Wash., D. C	42.50
	Irving Rouse, Tariff Comm. to Wash., D. C	31.80
	Geo. C. Seager, salary, stamps, etc	515.37
	Bastian Bros. Co., Badges	25.56
	Union & Advertiser Co., Badge Book	342.00
	Union & Advertiser Co., Letter heads, etc	75.54
	W. H. Moon, Tariff Comm. to Wash., D. C	31.00
	C. L. Yates, salary and postage	50.60
June 19,	L. H. Bailey, exp. to Convention	7.56
July 3,	T. B. Meehan, Exhibit Committee	4.68
	Union & Advertiser Co. folders, etc	29.00
	J. M. Pitkin, Tariff Comm. to Wash., D. C	39.40
July 17,	Union & Advertiser Co., return postals	14.50
	Emma Jacobson, reporting convention	88.78
Aug. 9,	W. P. Stark, exp. Transportation meeting	56.80
Sept. 4,	B. E. Fields, printing 1000 S. D. laws	25.55
Sept. 23,	Union & Advertiser Co., printing	162.81
Dec. 11,	McGuire & Wood	20.00
Jan. 11, '10	John Hall, Sec., stationery, etc.	23.24
Jan. 12,	M. E. Wolff Co., Bond for Treasurer	18.75
Jan. 20,	Wm. Pitkin and Mr. Rouse to Boston	64.70
Feb. 4,	J. B. Morey	12.05
Feb. 25,	W. C. Reed, Committee Washington	119.40
	Mr. Sizemore, exp. San Antonio	97.00
May 17,	W. P. Stark, exp. Inspection Bill, Wash., D. C	120.13
	Wm. Pitkin, exp. Inspection Bill, Wash., D. C	97.00
	J. H. Dayton, exp. Inspection Bill, Wash., D. C	61.75
May 19,	John Hall, Sec., stamps, envelopes, etc	68.48
	Union & Advertiser Co., Printing	36.00
May 26,	G. L. Holsinger, Wash, D. C., acc. House Bill	103.75
May 30,	Wm. Pitkin to G. L. Johnson, telegrams, etc.	30.68

Abner Hoopes, exp. Wash., D.C.,
acc. House Bill..... \$39.00

\$2488.03

June 4, Cash to balance..... \$4153.60 \$6641.63
All of which is respectfully submitted.

C. L. YATES, Treasurer.

REPORT OF JOHN HALL, SECRETARY

1909-1910

RECEIPTS

1909		
Nov. 11—	In Bank to account of Geo. C. Seager, Sec'y	\$ 26.75
1910		
	Memberships.....	1,695.00
	Advertisements in Badge Book.....	596.60
	Extra Badges and Badge Books.....	17.50
	Exchange remitted by Members.....	3.95
	Sales of Codes50
		<u>\$2,340.30</u>

AGRICULTURE IN NEW YORK. Bulletin No. 9, New York State Department of Agriculture.

One of the most suggestive publications in the way of a statistical document which has come to our table for some time is the one just noted. It has been issued under the hand of the Commissioner of Agriculture, who says in his introduction that "the farms of New York in the last census year represented a total investment in land, buildings and machinery of more than one billion dollars. The value of the annual output of these farms was nearly one-quarter of one billion dollars. More than two million people constitute the rural population of the State, and nearly four hundred thousand of these are actually engaged in agricultural pursuits."

The bulletin is an extract from the statistical reports of the United States Government, showing in graphic form the agricultural products of the State, usually given in unit areas in which the square mile is used. Colored charts employed to designate the different degrees of intensity with which the industry is prosecuted, gives great clearness to the results depicted. The bulletin should be in the hands of all persons interested in educational matters, and will be of particular and special value to farmers' institute speakers and experiment station officers.

HOW CHEMISTRY ENRICHES THE SOIL

It was chemistry that made agriculture a science. The great German chemist Liebig laid the first foundations of that science when, only a half century ago, he discovered the principles by which the fertility of the soil can constantly be restored to it through the use of proper fertilizers.

Since Liebig's time the world has made great use of the natural beds of sodium nitrate which are found in Chile. The nitrogen of sodium nitrate furnishes an element which is necessary to plant life. But the sodium nitrate beds of Chile will some day be exhausted; and chemistry has already furnished an artificial substitute. At Notodden, in Norway, they are taking nitrogen directly out of the air and using it in the manufacture of a nitrate which is just as good a fertilizer as the natural nitrate deposits of Chile.

PURE FOOD AND BENZOATE OF SODA

It does not appear that North Dakota intends to be governed by the rulings of the Federal Referee Board in regard to the use of benzoate of soda. This Board ruled that it was non-injurious in opposition to the opinion of Dr. Wiley. The food commissioner of North Dakota holds that the state will follow her own judgment in this matter and will not be guided by federal action. Benzoate of soda will not be permitted except in one or two instances, and then only under restrictions.

AMERICAN ASSOCIATION OF REFRIGERATION

The first annual meeting of the American Association of Refrigeration was held at Hotel Astor, New York City, May 9th and 10th, 1910. Among questions were the adoption of a more complete Constitution and By-Laws for the Association. Action upon the appointment and organization of special committees upon whom will devolve the work of formulating the special features of the work which has been undertaken by the Association, and the election of a competent Board of Refrigerating Engineers to have charge of the educational work of the Association.

Questions pertaining to the proposed legislation on Cold Storage and other local restrictive measures now pending or threatened before the legislatures of the various states and of municipal councils, were carefully considered with a view of assisting the industries affected.

Especial arrangements were considered for securing adequate American representation at the Second International Congress of Refrigeration to be held at Vienna, Austria, next October, with particular reference to securing the Third Congress for this country.

CANADA TO HAVE A NATIONAL APPLE SHOW

In all probability November next will witness the first Canadian National Apple Show in Vancouver, B. C. As a result of the success which has attended apple shows in the United States, particularly that held in Spokane, various public bodies in British Columbia are manifesting a keen interest in the proposal to establish a like exhibition in Vancouver. The newspapers of the province as well as all the agricultural bodies interested in fruit culture are endorsing it, and the mayor is soon to call a public meeting with the object of forming a permanent association.

The Fernwood Nursery Co. of Stamford, Conn., have given up their office and salesroom at 50 W. 30th St., New York City.

NEW JERSEY NURSERYMEN WARNED BROWN-TAIL MOTH DANGER

CAUTION TO IMPORTERS OF FOREIGN NURSERY STOCK

During the season of 1908 and 1909 brown-tail moths have been unusually abundant in continental Europe, and especially in France. The winter nests filled with caterpillars, have, therefore, been correspondingly numerous and have invaded nurseries and plant-growing establishments.

During the winter of 1908-09, thousands of these nests arrived on nursery stock at the ports of this country, chiefly New York, and the most rigid inspection work was needed to prevent the establishment of these pests in New York, New Jersey and other States where the insect does not yet occur. An attempt was made, during the summer of 1909, to secure the co-operation of the foreign plant growers in keeping out infected stock, but so far as France is concerned, with practically no effect.

Brown-tail nests with living caterpillars have already been found this season on plant stock recently received, and all gardeners, florists and growers that have ordered stock from abroad are requested to notify Prof. John B. Smith, State Entomologist, New Brunswick, New Jersey, that arrangements may be made for its inspection on arrival.

The establishment of this pest in New Jersey would mean even heavier loss than that inflicted by the San Jose Scale, and would affect more interests, since it feeds on shade as well as orchard trees. The insect is also a direct nuisance to the individual, the poisonous hairs of the caterpillar producing the "brown-tail rash," which is very painful and often difficult to cure.

Further information can be obtained by addressing Professor Smith at the address above given.

THE SAN JOSE SCALE AND SOME EXPERIMENTS FOR ITS CONTROL. Georgia State Board of Entomology. Bulletin 31.

Some important data have been obtained by the Georgia State Board of Entomology from a series of experiments conducted on two Georgia orchards with the miscible oils and prepared lime sulphur solutions in general use for the control of San Jose Scale. The results obtained indicate what may be expected from the sprayings at all practical proportions with the materials tested. Each compound had a trial as a fall treatment, as a spring treatment and as a double treatment, applied at the proportion fixed by the manufacturers and two applications at a greater strength. The concentrated lime and sulphur solutions were found to yield quite as good results as the best oils. A tree well sprayed with lime and sulphur offers a cleaner, brighter and healthier appearance, and besides its insecticidal value lime and sulphur possesses fungicidal properties to a much greater degree than is possible to incorporate in a soluble oil. A comparison also made with the home made lime sulphur and the prepared solutions showed both equally effective in the eradication of the scale, but the home-made goods, carrying a heavier percentage of free lime, eventually cleaned the trees thoroughly of rough bark and dead scales.

Following are some of the materials tested:

Scalecide (B. G. Pratt Co., 11 Broadway, New York), was applied at the three strengths, 1 to 15, 1 to 12, and 1 to 10, for the fall, spring and double treatments, and yielded results of the highest order. It can be relied upon to kill scale when carefully applied.

Target Brand Emulsion (Horticultural Distributing Co., Martinsburg, W. Va.), afforded a striking example of the effectiveness of fall sprayings over spring sprayings.

San-U-Zay (F. G. Street & Co., Rochester, N. Y.), gave praiseworthy results, aside from the spring application at 1 to 20 which was not successful. It ranks well up among the best oil compounds.

Thomsen Chemical Company's *Orchard Brand Lime and Sulphur Solution* yielded results of a high order with every treatment, the trees sprayed with this compound being practically free of all scale, and showing a healthy, clean bark.

Grasselli Chemical Company's *Prepared Lime Sulphur Solution* (Birmingham, Ala.), was very successful. It left only the slightest trace of living scale on the trees. This is used extensively in the peach orchards of Georgia.

Calcium carbide is best known to the public as the substance from which acetylene gas is produced, to be used spectacularly in the lamps of automobiles. Yet from this same calcium carbide the chemist is now making a fertilizer called cyanamid; and cyanamid contains all the nitrogen that any kind of plant can possibly need.

If all the natural nitrogenous fertilizers, such as manure, clover, and the sodium nitrate of Chile, were to disappear from the face of the earth tomorrow, chemistry could supply the deficiency with the nitrogen which it has learned to extract from the limitless spaces of air. Chemistry has made the atmosphere a nitrogen mine.

As long as we can get the proper fertilizers into the soil, there is no reason why it should lose its fertility. But chemistry is going even farther than this. It is beginning to suggest that the production of certain kinds of food should be removed altogether from the soil and transferred to factories. If indigo, which is a most complex substance, can be grown in a factory, why not wheat? If madder, why not potatoes?

(Munsey's Magazine, March 1910.)

SOUTHERN NURSERY CO., WINCHESTER, TENN.

The season here has been a very peculiar one. Spring apparently opened the first of March; vegetation started and made considerable growth until the first of April. April was cold, and we had ice and frost on several different dates during the month. However, we have a good fruit crop in our country and nursery stock looks very well at this time.

Peaches and 2 year old apple trees will be short in this section compared with our usual crop. Wages, seedlings and in fact almost everything has advanced in price until a great many nurserymen have cut down their planting, and only a few offer their trees in a wholesale way.

Heretofore, considerable June budding of peaches has been done in the South; while there is a fair supply being grown this season, the quantity will fall short of the usual amount.

We are having considerable rainfall now, which is not encouraging.

OREGON NURSERY CO., ORENCO, ORE

In the first place, we have had a very favorable season for the growing of nursery stock in the Willamette Valley. During March, the weather was very fine, allowing the plantings to be made early, and in good condition. Since, that time we have had frequent and sufficient rains to make a good growth, so that, on the whole, it may be said that growing nursery stock is fully up to the average this year.

Last year's seedling stock did probably the worst that it ever has in this section, which cut down the growing stock for this year considerably. At the present time, it looks as if there would be no long lines of nursery stock on the Pacific coast this year. The prospects are rather for an increased demand for all nursery products, while the production does not appear to have increased, especially in budded stock, which is scarcely up to the average in quantity. There no doubt will be a great many shortages, especially in apples.

Of course, it is too early to make any definite statements as to what these shortages will be; but it looks as if the commercial varieties will be sold out long before the end of the season.

As you probably know, we have been moving, for the past three years, from Salem to our new home at Orenco, and we are just now beginning to feel that we are established here, and can look forward to taking up matters along regular lines. We have been very much torn up for the past three years on account of this moving.—M. McDONALD.

AUGUSTA, GA., July 5th, 1910.

Editor NATIONAL NURSERYMAN,
Ithaca, N. Y.

Dear Sir:

Agreeable to your request of June 30th, we herewith give you a few notes. If too long, use the ax.

With best wishes, we remain,

Very truly,

P. J. BERCKMANS CO.

Doings of Societies**FIFTH DRY FARMING CONGRESS, SPOKANE, WASHINGTON, OCT. 3-6, 1910**

The meeting will open on Monday, October 3d, with addresses of welcome by the Governor of Washington, greetings from the various nations and states, and addresses by distinguished agriculturists in the United States and abroad. The practical farmer, the promoter, the agricultural educator, will be represented. The departments of the federal government are to furnish speakers. There is to be an institute department, in charge of a noted institute worker.

Entertainment in the form of excursions is to be provided, and illustrations of dry farming progress will be exhibited. The exposition is planned to be one of the great features of the enterprise.

MARYLAND STATE HORTICULTURAL SOCIETY

The annual summer meeting of this society was held on the fruit and nursery farm of the Harrisons at Berlin, Maryland, on July 28.

Full account in our next issue,

AMERICAN SEED TRADE ASSOCIATION

The floricultural papers announce a very interesting and successful meeting of the Seed Trade Association at Atlantic City on June 23d. The formal program was followed by a banquet, which was succeeded next day by a most interesting visit to Fordhook the Farms of W. Atlee Burpee & Company. The trial grounds of this famous farm proved to be replete with matters of instruction and interest to the visitors. Sweet pea trials were just approaching the flowering period. Mr. and Mrs. Burpee left a day or two afterwards for England to attend the exhibition of the British Sweet Pea Society.

TEXAS NURSERYMEN'S ASSOCIATION

Meeting of the Texas Nurserymen's Association was held on July 26th to 28th, at College Station. An interesting program was presented, one of the chief items of which was a discussion of the hairy root and root knot maladies of the apple. A report of the discussion on this subject, and papers given by the American Society meeting in Denver were presented.

CONVENTION OF THE AMERICAN PEONY SOCIETY AT BOSTON, JUNE 14 AND 15, 1910

The annual meeting of the American Peony Society in Horticultural Hall, Boston, was held in conjunction with the exhibition of the Massachusetts Horticultural Society.

In addressing the Society, President B. H. Farr spoke with enthusiasm of the encouraging prospect of a speedy and successful conclusion of the nomenclature work which the Society set out eight years ago to accomplish for the purpose of straightening out the confusion existing in the nomenclature of the peony and publishing accurate descriptions by means of which all authentic varieties may be identified. The test plot conducted by Cornell University has proved the necessity for its establishment, and it is expected before the season closes at Ithaca a total list of approximately five hundred varieties will have been identified and described. In narrowing the list of varieties down to the "best hundred" much will depend on the point of view. For the florist a variety is of no value if it does not keep well, ship well, have the right shade of color, and fragrance. The landscape gardener will consider, chiefly, the habit of the plant, its floriferousness and its general effect at a distance, planted in masses. The splendid collection which will be in existence at Cornell University will furnish the Society with unusual facilities for judging a new variety.

Secretary Arthur H. Fewkes in his report remarked that while from the inception of the Society interest had centered almost

entirely upon the herbaceous class of peonies—particularly the albiflora varieties—the most common and easiest of cultivation, in time more thought will be given to the Moutan class, or tree peonies, which possess an entirely different range of color, many of them being exquisitely beautiful in shade and texture. Preceding in their time of flowering the albiflora class, they widen the peony season very materially. It is true they are slow in coming to perfection and that grafting must be resorted to to perpetuate the varieties, but where love and skill are bestowed upon them these difficulties fade away and the reward is a ravishing display of beauty that will repay all the time and care given them.

CONNECTICUT HORTICULTURAL SOCIETY

To the Horticultural Trade:

This society holds two annual fall exhibitions. They will be, this year, as follows: A Dahlia Exhibition, September 23 and 24, at Unity Hall, Hartford; and a Chrysanthemum Exhibition, November 3 and 4, at Putnam Phalanx Hall, Hartford. Other seasonable flowers, vegetables and fruits, will be represented; but the leading flowers, at the respective exhibitions, will be dahlias and chrysanthemums.

In arranging the premium list, or schedule of prizes (which was, last year, a 24-page pamphlet, and limited to 1,000 copies), we are planning to make it a much more voluminous and important document than we have ever before issued; and hence are desirous of obtaining many new advertisements for its pages. We hope to add half-tone engravings of the society's leading officials, and to print 2,000 copies of the schedule; thus assuring wide publicity to all the advertisements contained in it. Rates for advertising will be, as heretofore, \$5 per page and \$2.50 per half page.

You are hereby respectfully solicited to place an advertisement in this 1910 premium list. We have not enough of copies left last season's list to forward one herewith for inspection, but any one desiring to see same is invited to write for a copy, which will be promptly furnished as long as the supply lasts. Last year's schedule was 6 by 9 inches in size, was printed on the best glazed paper, and was generally recognized as a fine typographical production. We trust that the new one will be fully equal in those respects and contain many additional pages. Electrotypes or half-tone engravings can be inserted, if desired, in advertisements, if they are furnished by the advertisers. Copy for such advertisements should be promptly sent to the undersigned; and payment for the space taken need not be made, if so desired, until autumn. We shall be glad to receive your patronage in this behalf. A copy of the schedule, when printed, will be sent to each advertiser.

June 18, 1910

GEORGE W. SMITH, Secretary

Among Experiment Station Workers

PECANS. North Carolina Dept. of Agr., Raleigh. Vol. 30, No. 9.
By W. N. Hutt.

"Commercial pecan culture is one of the most promising horticultural possibilities of the South," says the state horticulturist, Mr. W. N. Hutt, after three years of observation and research upon the subject of pecan culture in North Carolina, and he urges every landowner in the pecan region in addition to his home plantings for shade and family use, to utilize all his waste land by pecan cultivation. Thousands of acres of land lying within the overflow region of rivers, if planted to pecans, would become the most valuable lands in the state.

The pecan is a native of the Southern Mississippi Valley, but seems to thrive wherever cotton does, as well as considerably north of the cotton belt. It is found growing and thriving on almost every type of soil in the South, the subsoil and drainage conditions rather than the nature of the surface soil being the important factors.

FELIX and DYKHUIS BOSKOOP, HOLLAND ROSES

Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina

A Full Line of Hardy Nursery Stock
Price List Free

North Carolina Natural Peach Seed

1910 Crop ready for Shipment about AUGUST 15th

We will handle both country run and re-screened seed this season and will be glad to quote you at any time.

HICKORY SEED CO., Hickory, N. C.

Notice to the Trade

Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

H. DEN OUDEN & SON

The Old Farm Nurseries

BOSKOOP, HOLLAND

PEONIES

Our lists of 100 choice varieties for 1910 have already been mailed; did you get your copy? If not, and if interested in peonies do not fail to send for one. No finer, more healthy stock to be obtained anywhere. Prices right.

J. F. ROSENFELD, Peony Specialist
West Point, Nebraska

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor
(Successor to Blair & Kaufman)

Reliance Building, Kansas City, Mo.

Offer for SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

PEACH SEED

We now have in stock VIRGINIA NATURAL PEACH SEED crop 1910, can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,
4th Ave. & Clinton St., BALTIMORE, MD

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

ALL NURSERYMEN SHOULD BE INTERESTED IN COMMERCIAL FERTILIZERS

The American Fertilizer is a fortnightly magazine, devoted exclusively to the fertilizer industry. Sample copy free.

Subscription and Advertising rates upon application

THE AMERICAN FERTILIZER

WARE BROS. COMPANY,
Publishers

PHILADELPHIA
PA.

Publishers of The American Fertilizer Hand-Book

Pecan trees are quoted in nursery catalogues from 50 cents to \$2.00 per tree, according to size—prices which are only commensurate with the high cost and trouble of producing the trees. Set 60 feet apart, this requires but 12 trees per acre, so that ordinary cultivated crops can be grown until the pecan themselves pay for the use of the land. Thus the planter gets a very profitable orchard cheaper than in any other part of the country.

Directions how to plant the pecan are given in the bulletin, when to transplant, and for summer treatment of transplanted trees, etc. The day of the unfruitful seedling tree is past for commercial pecan orcharding. By grafting and budding the desired characteristics are now obtained with unerring accuracy. Many varieties begin bearing at 4 to 6 years, but paying results are not to be looked for under 10 years.

INSECTS INJURIOUS TO STRAWBERRIES. Bulletin 225, N. J. Agrl. Expt. Station.

This bulletin sketches the origin, appearance and habits of the insects attacking the strawberry, the extent of the injury caused, the varieties and conditions of attack and the remedial measures to be taken, together with illustrations for identifying these enemies. The strawberry weevil, leaf roller and root-louse are the three most threatening assailants of the strawberry crop. Directions are given for fumigation of plants. The less injurious attacks of the strawberry white-fly, leaf-beetle, white grubs and ground beetles are also given attention.

THE UTILIZATION OF PEA-CANNERY REFUSE FOR FORAGE. Circular 45, Bureau of Plant Industry.

Only recently in the history of the pea-canning industry has the value of the refuse vines been appreciated as silage, as hay, as a soiling crop, and as a fertilizer. The most popular method of use is to ensilage either in silo or stack, which compares very favorably with corn silage. The curing of pea vines for hay is becoming very common, being a valuable feed for all classes of stock. As a soiling crop they are probably equal to any grown, but such use is limited to the vicinity of the cannery or viner. As a manure, the vines have an actual fertilizer value of about \$2.60 a ton.

THE MISTLETOE PEST IN THE SOUTHWEST. Bulletin 166, Bureau of Plant Industry.

The American mistletoe—*Phoradendrons flavescens* (light yellow tree thief) cherished because of its biologic interest and historic setting, is in some districts rather to be feared for its harmfulness as a tree parasite. The biology and life history of the mistletoe, its distribution and harmful occurrence are sketched in this bulletin, and methods given for combating it. The problem of the eradication or control of mistletoe is one which civic improvement organizations could help solve in large measure. The commercial status of the mistletoe as a Christmas decoration has of course some bearing upon the question.

JULY CROP REPORT

The following tabulation is a summary for the United States of crop conditions on July 1, with comparisons, as estimated by the Bureau of Statistics of the United States Department of Agriculture.

CONDITIONS JULY 1

Crops	1910	1909	1908	10 Yr. Av.	June 1, 1910
Apples	49.6	54.6	57.6	61.9	53.0
Peaches	62.1	50.0	69.7	61.4	62.0
Pears	61.0	57.5	69.7		63.2
Grapes	80.2	90.2	87.9	88.5	
Blackberries ..	77.0	88.8	90.5	90.0	80.0
Raspberries	76.2	89.5	88.4	88.6	79.2

W. H. Blowers, Westfield, N. Y., nurseryman and grape vine specialist, sends descriptive price list of Blowers blackberry, the 20th Century product.

100,000 Apple. 1 yr, 4 to 5 ft. and 5 to 6 ft., for Fall 1910. We grow the finest 1 yr apple in the world. Figure with us.

A. L. LUKE, Wynnewood, Okla.

Waxahachie Nursery Company

J. R. MAYHEW, Pres.

Growers of high grade Nursery Stock. Very large surplus for Fall 1910 and Spring 1911. Solicit a share of your patronage.

Waxahachie Nursery Company, WAXAHACHIE, TEXAS.

ROSES TO LINE OUT

200 Standard and New Sorts
in 2 1-2 and 4-inch Pots.

THE LEEDLE FLORAL COMPANY®
SPRINGFIELD·OHIO·

BUDS Apple, Cherry, Pear, Peach, Plum, etc., ready to ship July 1st. Our Growing Nursery Stock is very promising. Prices lower now than later. Big lot of Scions. Write for prices.

John A. Cannedy Nursery & Orchard Co.

Carrollton, Illinois.

California Privet Fruit and Shade Trees Evergreens

SAMUEL C. DE COU

Moorestown, Burlington County, N. J.

ESTABLISHED IN 1897

EM. Van ESPEN, President

CENTRAL PHOSPHATE COMPANY

Miners of High Grade Florida, Tennessee and South Carolina Phosphate; TENNESSEE RAW GROUND PHOSPHATE ROCK, all grades

Address

MT. PLEASANT, TENNESSEE and 18 CHAUSSEE D'ANTIN, PARIS, FRANCE

BEVERLY NURSERY COMPANY

W. T. MITCHELL & SON, PROPRIETORS

Growers of High Grade Nursery Stock.

We have to offer for Fall, 1910, and Spring, 1911, 100000 fine Two Year Apple Trees, and 30000 choice Three Year old Apple Trees; also, 90000 Peach Trees. Standard Varieties. Prices reasonable. We solicit a share of your trade. Address,

BEVERLY, - - OHIO.

Amoor River Privet

by the thousand or carload. Also have in quantity California Privet, all sizes, Shade Trees, Silver, Sugar and Norway Maples, Sycamore and Carolina Poplars, Grape Vines, Cannas, Peonies, Etc. Prices right. Prompt and satisfactory services. Let us quote you on your wants before placing your order. It will pay you.

Valdesian Nurseries, Bostic Department
BOSTIC, NORTH CAROLINA

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

JAS. H. BOWDITCH

903 Tremont Bld., - - - Boston, Mass.

Personal Mention

ST. LOUIS

J. H. Dayton of Storrs & Harrison Co., Painesville, O., and Thos. Meehan of Thos. Meehan & Sons, Philadelphia, spent a day in the city on their return from the Denver convention. They were chaperoned by Frank A. Weber during their stay. Mr. Weber reports that he has been re-appointed chairman of the Entertainment Committee by President Stark and J. W. Schuette of this city was appointed chairman of the Committee on Exhibits for the 1911 convention which will be held in this city.

TO OUR CUSTOMERS

MONROVIA, CAL., June 1st, 1910.

We wish to inform our customers and friends that the business and good-will of the PIONEER NURSERY, has been sold by Mr. R. H. Wilson, to the PIONEER NURSERY Co., A. Foster, Pres., Geo. H. Jackson, Mgr. The Pioneer Nursery is the oldest nursery in the County, having been established in 1876 by the retiring proprietor.

Mr. Jackson has been connected with the business during the past eight years, having charge of the Ornamental and Sales Department for five years and we can assure our patrons that there will be no change in the policies which have built up our trade in the past, viz.—good stock at the lowest possible price and our guarantee of satisfaction with everything we sell.

We wish to take this opportunity to thank our former customers, and to solicit the continuance of your patronage, which we hope to merit by our prices, quality, service and reliability.

We hope to increase and perfect our facilities for handling your orders promptly and correctly and extend a cordial invitation to all to visit our nursery.

Mr. Wilson retires from active participation in the business, to devote his entire attention to the growing of Deciduous Fruit Trees, which will be handled exclusively by the Pioneer Nursery Co. A copy of the price-list of this stock will be mailed when issued, to all names on our mailing list; send in your name and address.

All bills dated before June 1st, 1910 are payable to R. H. Wilson and all claims for debts contracted before that date, should be sent to him.

We ask that all accounts be settled promptly as we are anxious to close up the business to date.

PIONEER NURSERY CO.
GEO. H. JACKSON, Mgr.

Catalogues Received

Four-page folder of nursery necessities, Jackson & Perkins, Newark, N. Y., including counters, pruning and propagating knives, fertilizer and distributors, etc.

Peonies. Wholesale list, Jackson & Perkins, Newark, N. Y.

Biltmore Nursery, Biltmore, N. C. Tenth edition of wholesale trade list, season of 1908-09. Very neat looking catalogue.

Brown's Nurseries, Ontario County. Surplus list, also list of shorts.

The Huntsville Wholesale Nurseries, Huntsville, Ala. Trees. November 1908.

WANTED

Two carloads general line of Nursery Stock for fall shipment for SPOT CASH. PRICES MUST BE RIGHT.

LOCK BOX 227, ST. JOSEPH, MO.

Compass Cherry Buds in Quantity

Amoor River Privet and Silver Leaf Poplar Cuttings

L. H. SMITH, Nurseryman
COUNCIL BLUFFS, IOWA

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel
INDIANA HARBOR, IND.

GRAPE VINES A SPECIALTY

T. S. Hubbard Company

FREDONIA, N. Y.

ESTABLISHED 43 YEARS

We offer for Fall and Spring trade a large and complete stock of one and two year old GRAPE VINES in strong grades for nurserymen and dealers trade.

We also have an extra nice stock of one year CURRANTS. Send us your want list for prices.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

National Florists' Board of Trade, 56 Pine St., New York.

Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES; TWO YEAR CALIFORNIA PRIVET, CAROLINA POPLARS, and CATALPA SPECIOSA.

WE INVITE YOUR INSPECTION.

Easterly Nursery Co., CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS. Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

THE LAFEAN BILL

This bill which was in a more or less dormant condition for some time owing to the efforts of the Western fruit growers to squelch it and the pressure of other legislative matters in Congress. The passage of the bill was urged on March 5th by N. G. Gibson and W. L. Wagner of the Fruit Jobbers, Association and International Apple Shippers' Association respectively. These associations are in favor of the bill as it stands. It is important that it should be settled one way or another, for box manufacturers are keenly interested in the outcome. The main point of difference is in reference to the size of the box, and this of course affects the manufacturer very intimately. The matter stood in this way until late in April when it was decided not to report the bill out of committee. It will probably be called up at the next session, if the fruit interests look after it, otherwise it is likely to die a natural death.

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CANADIAN NATIONAL APPLE SHOW

The first Canadian National Apple Show to be held at Vancouver for an entire week, beginning October 31, is expected to be a great event of its kind. More cash will be paid for the prize-winning exhibits than ever before offered by a National or International Apple Exposition, and several thousands of dollars will be expended for costly solid gold, silver and bronze medals which will be of elaborate and artistic design, especially manufactured for this Exposition.

To carry out the true national scope of the Exposition, the management has decided to eliminate competition within districts and to offer prizes for districts exhibiting against one another. In other words, a province, state, or a specified locality within a province or state may compete for what is known as the district prizes which will amount to nearly \$1,000 in cash offered by the management.

The judges of the show will be men of the highest standing both as to character and ability to differentiate varieties and judge the quality of the fruit. The chief judge will be Mr. H. E. Van Deman of Washington, D. C., known throughout America as an expert pomologist. Mr. Van Deman has judged the horticultural exhibits of nearly all of the World's Expositions held in America. He is probably the best exponent of his line of work living. The associate judges will be announced within a few days.

Editor NATIONAL NURSERYMAN:

My attention has been called to an article on the Canadian National Apple Show, which appeared in the July issue of your splendid publication under the heading of "Doings of Societies," page 653, and which has done our undertaking a very great injustice. I am well aware that you did not so intend.

In the first place the Dominion government was never asked for financial aid to the first Canadian National Apple Show, and while the British Columbia government declined to appropriate the sum originally asked for \$19,000, the citizens of Vancouver immediately got together and raised by popular subscription more than \$10,000 in a single day, which with the appropriation already made by the Municipality of Vancouver gave assurance of ample financial support so that no time has the undertaking been in the least danger of abandonment. We, therefore, hope that you will make the necessary correction in the next issue of the NATIONAL NURSERYMAN.

Very truly yours,

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L. G. MONROE, Secretary

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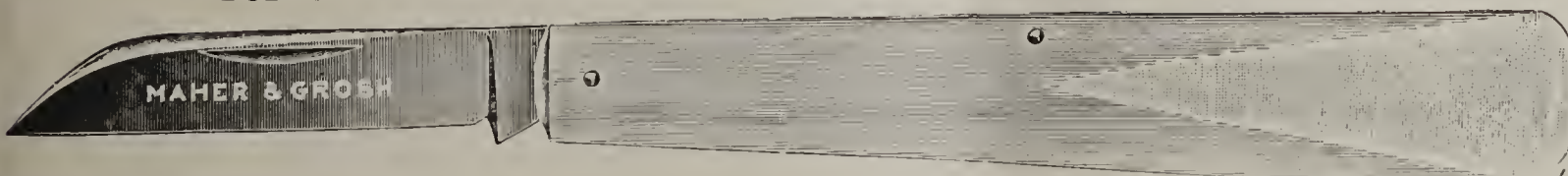
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Grow all kinds of nursery stock, Ornamentals, Deciduous
fruits, Citrus fruits. Largest general nursery in Southern Cal.
Must sell in order to give our Orange and Walnut groves
proper attention. Address E. S. RICHMAN, Fullerton, Cal.

WANTED a position as manager or managing
foreman, by a capable and thoroughly
experienced young man. Would consider an office position
at moderate salary where there is opportunity for rapid
promotion. Address "Moderate," care NATIONAL NUR-
SERYMAN.

WANTED farm manager, who has some know-
ledge of nursery and greenhouse
work. A good place to the right man. State ex-
perience and name references.
N. N. W., P. O. Box 330, Richmond, Virginia.

FOR SALE

North Georgia Nursery Plant close to Atlanta, Ga. One
mile from depot on one of the best railroads in the South; 66
acres of deeded land on which there are two dwellings, one cabin
and numerous other out buildings; large packing house. Pas-
torage under new wire fence. 3 acres in assorted home or-
chard and vineyard; 2 acres in strawberries, 1 acre in raspber-
ries, blackberries and dewberries, 1 acre in budded pecans.
Over 100,000 trees, vines and shrubs that will be ready to sell
this fall; 40 acres of leased land on which we have Commer-
cial Peach Orchard that will bear next year. Lease expires in
1920. We will sell the whole equipment to a man of moder-
ate means and on very favorable terms. Party must be a
hustler and have executive ability. Address "North Georgia,"
care National Nurseryman.

Western Nursery for Sale

ONE OF THE BEST LOCATED NURSERIES FOR SALE

Will stand strictest investigation

Terms can be made to right parties

Large territory waiting for stock

Everything ready for business

WRITE FOR PARTICULARS

Address L. C., National Nurseryman

WANTED A competent, practical propagator,
with ability to handle men. Experi-
enced man with good testimonials. Chance to buy stock in
Company if proven capable and worthy. Address:

THE WHITING NURSERY CO., Yankton, So. Dak.

WANTED

A competent foreman who understands all field and inside
work, budding, grafting, etc. Should have knowledge of all
lines of work pertaining to the business and ability to handle
men. Address "NEBRASKA," care of National Nurseryman.

FOR SALE

An interest in a well established retail Nursery in the central
west. Buyer must be reliable and competent to take active
management and invest \$2000.00. Address "R" care
National Nurseryman.

WANTED

Young man with thorough ornamental nursery stock train-
ing. Splendid opening for right party. Must furnish the
best of recommendation. Address
THE ELM CITY NURSERY CO., New Haven, Conn.

WANTED

Energetic young man as superintendent of a pecan orchard
to be located at Jeanerette, Louisiana, must be experienced in
nursery work, used to handling men, free from bad habits,
perfectly reliable. State experience, give references, state
wages wanted. Good opportunity.

STANDARD PECAN CO.

433 Unity Building, BLOOMINGTON, ILL.

LEVAVASSEUR & SONS, Nurseries at Ussy and Orleans FRANCE

Wholesale Growers of Fruit Tree Stocks, Ornamentals, Evergreen Seedlings; etc. Best Grading Quality, and Packing.
Largest shippers to this country. All leading nurserymen are our regular customers. Orders booked now for delivery for season
of 1910. Compare prices quoted in last Trade list. For catalogues and price list address us or our

American Agents, AUGUST RÖLKER & SONS, New York, 31 Barclay Street or P O. Box 752.

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have full list of varieties for fall trade with special inducements for orders for late fall
delivery in car lots, or cellared for Spring if desired. Our facilities are unsur-
passed for handling these large orders. Try us and be convinced.

Not satisfied with our present large cellars, are now build-
ing one 112 ft. by 240 ft. connecting with and south
of present brick cellar.

OUR SPECIALTIES ARE

ROSES

H. P.

Moss

Ramblers

Climbers, Etc.

PEACHES

PEARS

PLUMS

CHERRIES



PAEONIES

Ornamental
Trees and
Shrubs in
Car Lots

Weeping Mulberries
Elm and Ash

Clematis

Ampelopsis

Paeonies

Hydrangeas, Bush
and Tree

Holland Bulbs

NO TROUBLE TO PRICE YOUR WANTS

55 Years

1200 Acres

44 Greenhouses

THE STORRS & HARRISON CO.

PAINESVILLE, OHIO

When writing to Advertisers please mention The National Nurseryman.

A BLUE ROSE

The Greatest Rose Novelty of the Century

It flowered with us this season and
was greatly admired

The New Rambler (Violet Blue), hailed by the German rose growers as the fore-runner of a genuinely cornflower blue rose, is a seedling of Crimson Rambler, very vigorous and hardy, and full blooming.

SEND FOR DESCRIPTION AND PRICE

Ellwanger & Barry

MOUNT HOPE NURSERIES

ROCHESTER, N. Y.

1910-For Fall & Spring-1911

WE INVITE CORRESPONDENCE NOW
REGARDING OUR

SPECIALTIES

CLEMATIS

ROSES

TREE HYDRANGEAS

AMPELOPSIS

PEONIES

IN ADDITION TO A COMPLETE STOCK OF

Fruits & Ornamentals

Jackson & Perkins Company

WHOLESALE ONLY

Growers of The Preferred Stock

NEWARK, (near Rochester)

NEW YORK

SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

Berckman's Southern Grown Plants Bring Profit to You and Satisfaction to Your Trade

It's a big satisfaction to supply your trade with such uncommonly **good** stock as the following quartette of varieties represents. It's a mighty **substantial** satisfaction, too, because **it really helps you build more business.**

These plants, when grown in Northern nurseries, cannot approach the magnificent growth they make when propagated in the South. Write and ask us about this, and the other stock we grow for Northern trade.

WE CAN SUPPLY THE FOLLOWING IN CARLOAD LOTS:



BIOTA AUREA NANA (Berckman's Golden Arborvitae) The best of the Biotas, Dwarf, compact; attractive "golden" foliage. 40,000 plants in various sizes.

MAGNOLIA GRANDIFLORA. Splendid native broad-leaved evergreen. Magnificent white flowers. 25,000 pot and field grown.

AZALEA INDICA. Illustration represents a specimen plant photographed at our Nurseries. We have more than 10,000 plants in 50 varieties.

CITRUS TRIFOLIATA (Hardy orange) One of the best hedge plants we know. Glorious white flowers, grows rapidly.

We'll gladly send our trade list and descriptive catalogue on request, telling all about these and other plants. It will pay you to push Berckmans' stock with your trade this season.

P. J. BERCKMANS' CO. Inc., Fruitland Nurseries

Established
1856

Augusta, Georgia

Over 450 Acres
in Nursery.

The Farmers Nursery Company

TROY, OHIO

OFFER

APPLE, assorted, heavy in light grades
PEAR, Standard, assorted, extra fine lot of Kieffer
CHERRY, 2 year, the finest stock we have ever grown
PLUM, Japan and English, good assortment of varieties
PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.
NORWAY SPRUCE, 2 to 8 ft.
ARBOR VITAE, 2 to 4 ft.
BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
Catalpa Bungei, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

Alma Nurseries

OUDENBOSCH - HOLLAND

Where the Choicest of Ornamental Trees and Shrubs are grown.

NORWAY MAPLES

In all sizes from young whips to large trees

EVERGREENS

in all varieties and sizes, such as

Koster's Blue Spruces, Mugho and Cembra Pines, Junipers, Retinosporas, Etc.

Schwedler Maples	Red and White Flowering Horse-
Purple Birches	chestnut
Elms, Lindens	Rivers' Purple and Copper Beeches
Oriental Planes	Pin, Red and Golden Oaks
Paul's Scarlet Hawthorn and others	
Roses, Rhododendrons,	Pendulous Trees, Shrubs, Etc.
Box, Azalias	

Write at once to our American Agent:

LEONARD OORTHUYLS,
POUGHKEEPSIE, N. Y.

or for the states of Cal., Ore., and Wash., to
J. MEERKAMP VAN EMBDEN,
THORNTON, San Joaquin Co., CAL.

W. FROMOW & SONS

Windlesham Nurseries, Surrey, England

Offer 250 acres of Hardy Outdoor Nursery Stock in great variety, chief among which may be noted the following:

Hardy Named Rhododendrons in such varieties as Everestianum, Caractacus, H. W. Sargent, C. S. Sargent, Kettle-drum, Chas. Dickens, Lady Armstrong, Atrosanguineum, Chas. Bagley, Alba elegans and grandiflora, Giganteum, Old Port, Fastuosum fl. plena, Roseum elegans, Delicatissima, Ed. S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the Parson's Hybrids.

Andromeda Florib: transplanted 3-4 consecutive springs, bushy, well rooted plants, 6-18 inches. 20,000 to offer.

Andromeda Japonica, extra bushy, 9-24 inches.

AZALEA MOLLIS, extra bushy, well budded stock, 9-24."

AZALEA GHENT, hardy sorts, own root and grafted, extra bushy, 6-24 inches.

AZALEA PONTICA, sweet scented yellow, strong and bushy, 12-36 inches.

RHODODENDRON PRAECOX, transplanted, extra bushy, 6-18 inches.

BOX HANDSWORTH and common TREE BOX, 6" to 5 ft.

ABIES ORIENTALIS, PARRYANA, KOSTERIANA.
JUNIPERUS ALBA VARIEGATA.

PINUS CEMBRA, transplanted Spring 1910, strong, bushy, 12-30 inches.

RETINOSPORAS filifera, pisifera, pisif-aurea, plumosa, plum-aurea, obtusa compacta. TAXUS FASTIGIATA

AUREA. THUJA OCCID-LUTEA.

BEACH PURPLE, 3-9 ft. Seedlings, extra fine.

LIMES, Argentea, Dasystila, 5-8 ft.

OAK, scarlet American, 6-9 ft. NUT, purple, 2-5 ft. extra bushy. LILACS on their own roots. VIBURNUM PLICATUM, 3-6 ft. extra bushy.

ROSES! ROSES! in best field grown budded stock, well-rooted, true to name; Hybrid Perpetuals, Hybrid Teas, Moss, Polyanthas, Climbers, etc., in Standards, Half Standards and Dwarf, in all leading sorts.

ALL FOR DELIVERY SEASON 1910-1911; new preliminary list now ready. When in Europe, you are invited to visit our Nurseries, one hour's ride from London. Send your orders timely through our Sole Agents for U. S. A. and Canada.

AUGUST RÖLKER & SONS

31 Barclay Street, or P. O. Box 752, NEW YORK

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

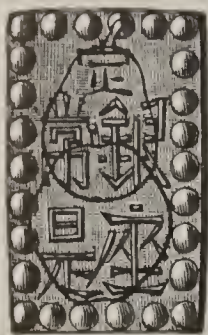
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES, several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Spring of 1910 in large quantities as usual:

SPECIALTIES

PEARS—Bartlett and Beurre de Anjou, one year, in large supply. As fine in quality as ever grown.
PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.
PEARS—Assorted leading varieties. One and two yrs. old.
CHERRIES—On Mahaleb. Leading sour varieties. A large block but not as many as usual.
PEACHES—We excel in Peaches, and of these we will have as large and as fine a stock as we have ever grown, both in one year and June Buds.
PLUMS—A light stock of these for this year.
PECANS—We make a specialty of grafted Pecans. These are grown in our branch nurseries at Biloxi, Miss., where the conditions are very favorable for their propagation.
ROSES—Budded. We have discontinued the propagation of Roses at Biloxi. We will have a large stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.
PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.
MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Horseshoe Brand Bamboo Canes

Nurserymen who want a first class grade of Bamboo Canes will find the Horseshoe Brand the best to buy. Quotations on all sizes upon application. Orders should be placed six months in advance for quantities of long poles for staking trees, etc., in order to obtain proper deliveries.

Don't delay--write now.

Ralph M. Ward & Co.

12 WEST BROADWAY, NEW YORK

OUR CATALOGUE FOR FALL, 1910, IS NOW READY

Have you received a copy? If not, let us know and we will see that one is sent you at once.

Every nurseryman should have a copy of this Trade List as it will be of great assistance to you when in the market for stock. It will show you where you can get what you want at right prices and of a quality that is a No. 1 in all respects. This catalogue offers a vast assortment of Hardy Ornamental Trees, Shrubs, Evergreens, Vines, Herbaceous Plants, etc.

We have 225 acres devoted to growing ornamental nursery stock and we make it a point to grow our stock to give satisfaction. Every plant is given sufficient room for development and plenty of manure and cultivation. As a result our stock is healthy, well formed and bushy. In digging we do not chop off the roots, but instead supply each plant with plenty of roots. **Our stock gives value and satisfaction for your money.**

Thomas Meehan & Sons
Wholesale Nurserymen
DRESHER, P.A.

B. & A. SPECIALTIES.

BLUE SPRUCE, all sizes, 2 to 7 feet.
WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.
ROSES, Hybrid Perpetual and Hybrid Tea varieties.
CONIFERS and EVERGREENS, 150 varieties.
RHODODENDRONS, Hardy Hybrid and Maxima, 50 varieties.
EVERGREEN SHRUBS, 35 varieties.
FLOWERING SHRUBS, 350 varieties.
JAPANESE MAPLES, 25 varieties.
ORNAMENTAL DECIDUOUS SHADE TREES, 50 varieties.
WEeping and STANDARD DECIDUOUS TREES, 50 varieties.
HEDGE PLANTS, 25 kinds.
HARDY VINES and CLIMBERS, 75 varieties.
PLANTS and TRAILING VINES, 12 varieties.
SPRING and SUMMER FLOWERING ROOTS and BULBS, 250 varieties.
DECORATIVE and FLOWERING PLANTS, 50 varieties.
TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries, Pears, Apples, etc.
SMALL FRUITS, 75 varieties.
NEW and RARE TREES, SHRUBS and EVERGREENS, 35 varieties.
MISCELLANEOUS NEW and RARE PLANTS and VINES, 25 varieties.
HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.
NEW and RARE CHOICE HARDY PERENNIALS, 65 varieties.
ORNAMENTAL GRASSES, 30 varieties.
HARDY FERNS, 50 varieties.

ASK FOR WHOLESALE CATALOG

VISIT NURSERIES

BOBBINK & ATKINS,

NURSERYMEN AND FLORISTS,

RUTHERFORD, N. J.

FRANS VAN DER BOM

THE HORTICULTURAL AGENCY, Oudenbosch, Holland.

Before placing your orders ask for our prices.

Andromeda	Dracaena	Manetti
Araucaria	Evergreens	Norway Maple
Areca	Flowering Shrubs	Ornamental trees
Aspidistra	Forest Trees	Paeonies
Azalea (Hardy)	French ornamentals	Planes
Azalea indica	Fruit stocks	Phoenix
Bay trees	Hollies	Rhododendron (Hardy)
Beech, purple	Hortensia	Rhododendron (Parsons)
Buxus	Hydrangea	Roses, dwarf
Chestnuts	Japanese Maple	Roses, tree
Clematis	Kalmia	Roses, new varieties
Climbers	Kentia	Schwedler Maples
Cocos	Koster's Blue Spruce	Spiraea
Convallaria	Latania	Thorns
Conifers	Magnolia	Tilia
		Weeping Trees

Send us a postcard and we will mail you our descriptive catalogue by return mail.

CHERRY OFFER

WE offer the trade, in car lots f. o. b. Huntsville, Ala., 75,000 2-yr. cherry, Alabama grown, made up of the following varieties:

Black Tartarian	Dyehouse
Montmorencies	Napoleon
Early Richmond	Suda
Ger. Ostheimer	Windsor
Governor Wood	Wragg

also extra fine 1-yr. and 2-yr. cherry Louisiana and Dansville grown. Special price on car-lots.

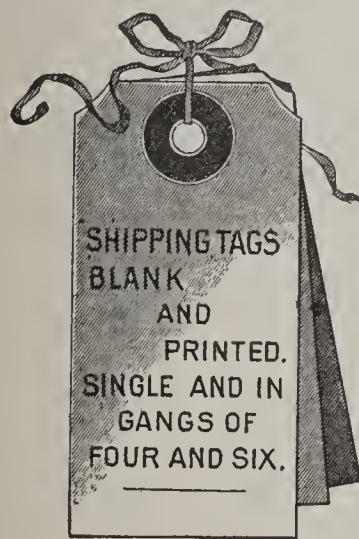
Quotations will be promptly submitted on application. Quick action is suggested.

Stark Bro's Nurseries & Orchards Co.
General Nurserymen
Louisiana, Missouri U. S. A.

Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

FRUIT TREES

(ENGLISH GROWN)

OVER HALF A MILLION
TO SELECT FROM

APPLES: Maidens, Bushes and Half-Standards are a leading feature with us. 250,000 in stock.

PLUMS AND PEARS. Enormous stock in leading kinds.

CHERRIES, Peaches, Nectarines and Apricots in heavy quantities.

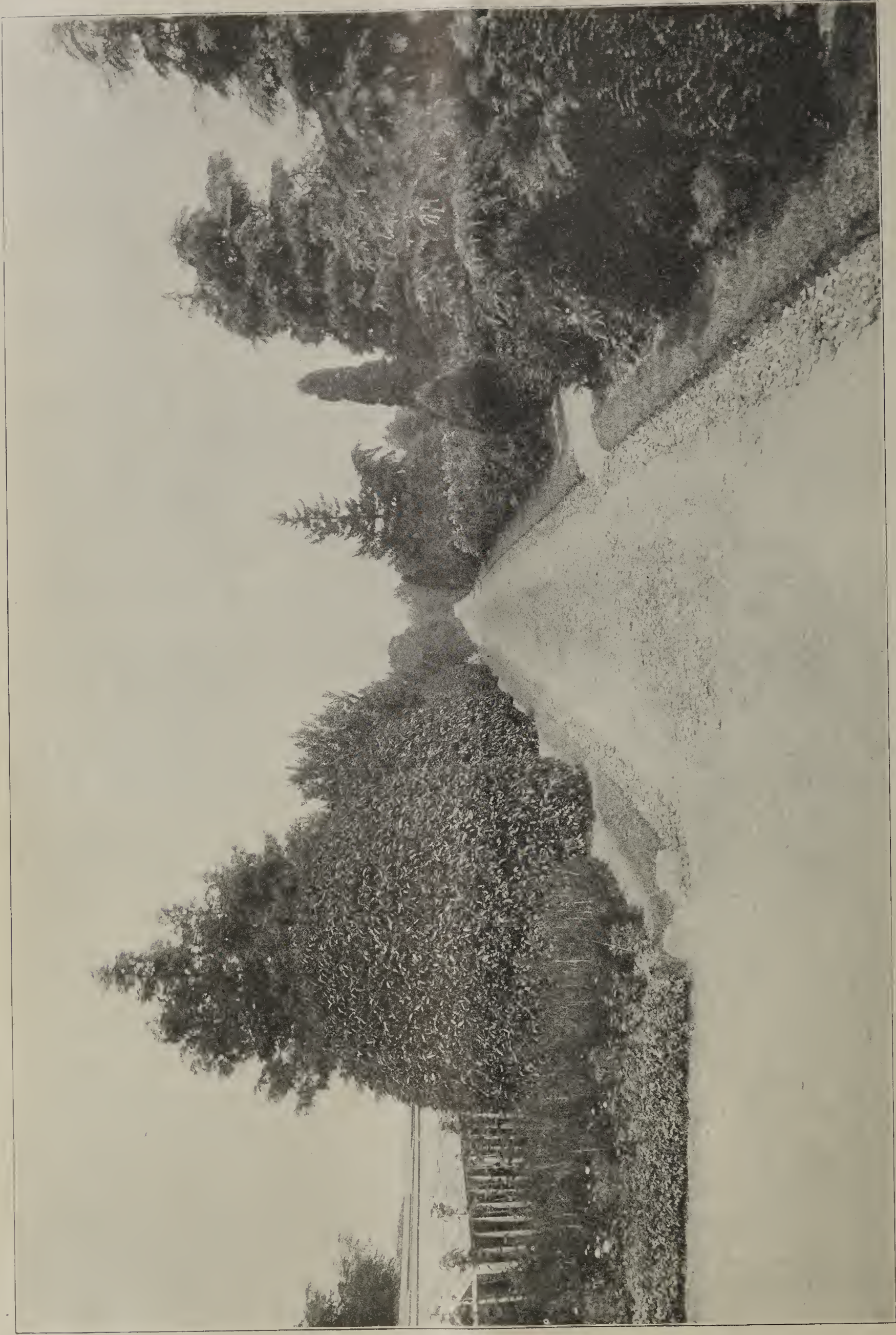
Fruit Trees are our leading line.

Inspection invited to nurserymen visiting England. Our nurseries are only ten miles by rail from London.

List of varieties grown and quotations sent on application. We have no agents. Write direct to

S. SPOONER & SONS

Fruit Tree Growers and Nurserymen
HOUNSLOW, ENGLAND



A view in Goldsworth Nursery, Woking, Surrey, England.
Walter C. Slocock, Proprietor.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII.

ROCHESTER, N. Y., SEPTEMBER, 1910

No. 9

WHERE DWARF APPLES AND HARDY RHODODENDRONS ARE GROWN IN WHOLESALE QUANTITIES

The Goldsworth Nurseries, Woking, Surrey, England

Mr. Slocock has been in business somewhat over thirty years. The establishment which he now controls is one of the oldest nurseries remaining which originally depended on the London district for its trade. A family of the name of Turner held it for many years; later a Mr. Donald operated it successfully, coming to the nursery about the year 1800. References are made to this nursery in the *Gardeners Magazine* (Loudon's) 1825. Loudon was a frequent visitor here—the nursery afterwards came into the possession of the well known Waterer family and they were succeeded by the present proprietor.

A WHOLESALE EMPORIUM

This is one of the most extensive nurseries in the great tree growing region of Surrey. It is situated about one mile from the village of Woking, in the famous region of Aldershot, which as some of our readers know, is the noted

military camp of England. The nursery proper covers an area of about 300 acres. There is a desirable variety of soil in the different parts of the grounds. In the lower levels along a small stream and by the banks of an old canal, peaty soil well adapted to Rhododendrons and heath plants is found. On the higher ranges sandy loam well adapted to peaches and herbaceous plants prevails.

TRAINED NURSERY PRODUCTS

The tract is roughly divided into two parts, the 'old' and the 'new' nurseries. In the former the stock is divided up into divisions by beautiful beech and arborvitae hedges. These hedges seven to eight feet high presenting an absolutely uniform wall of green in the summer time, compact and impenetrable, are a revelation to the man from the Western hemisphere. Some of them are 50 years old



Hardy Rhododendrons, Goldsworth Nursery, Woking, Surrey, England.
Walter C. Slocock, Proprietor.

yet show no signs of age. They act as wind-guards for tender plants and give favouring conditions for the growth of young seedlings. They also may, by the use of gates, be employed as effective barriers to any area which the proprietor may wish to enclose. In this older section one finds the finest nursery products, the systematically trained fruit tree, the formally pruned conifer, the fine specimens of select varieties of deciduous and coniferous trees. In this section are what might be called type specimens of the large stocks grown in the second and newer division of the nursery land. It forms the great "show case" display of the establishment.

HEATHS AND THEIR ILK

In the lower and newer part we find varieties and species grown in quantity, great numbers of beds of rhododendrons, azaleas, and heath plants generally. Here also are the seedling beds of pines, spruces, firs and the like.



A Peach tree being trained for growing on a Wall or Trellis.



A feature of the Goldsworth Nurseries is the Beech Hedges ten feet high dividing the different cultures—Magnificent walls of living green.



Dwarf Apples grown in wholesale quantities in the Goldsworth Nurseries.

The visitor is constantly impressed in this section with the large quantity of stock grown as he is struck in the older section of the ground by the great variety of the stock produced.

CONIFERS IN VARIETY

Among the striking features about the grounds are the fine specimen conifers, the magnificent old Cedars of Lebanon, magnolias, purple beech, and the great beech hedges already noted. The proprietor is also fortunate in having on his place a veritable cottage of the fifteenth century. This has been renovated and is in excellent state of preservation. It adds an interesting historical feature to the place.

The labor question so often discussed as one of the serious problems of the nurseryman, does not seem to affect Mr. Slocock. Labor is abundant and at reasonable prices. Being near the village of Woking, one of the pleasantest parts of beautiful Surrey, cheerful homes are



A Block of Bush Apples on the Paradise Stock, in Goldsworth Nurseries, Woking, Surrey, England.
Walter C. Slocock, Proprietor.

easily obtainable by the laborers and this does much to solve the problem.

A WHOLESALE ESTABLISHMENT

Mr. Slocock's trade is chiefly a wholesale one. While the selected specimen trees of which we have already spoken are available to the home retail purchaser, the main dependence of the nurseryman is upon the buyer who handles stock in wholesale quantities.

DECIDUOUS ORNAMENTALS

The very suitable character of the soil and plentiful labor permits the production of large quantities of stock. Ornamental trees of all descriptions are grown here in large quantities. Roses, rose stocks, and fruit tree stocks. This I understand is among the leading English nurseries to supply the trade with grafting stocks of all kinds. Fruit trees in trained and pyramid form are to be seen in quantity, of good growth. Rhododendrons, Mr. Slocock is much interested in, for some years he has been forming a collection of the best hardy kinds for the American climate, he considers British grown plants superior to Continental, not being too rapidly grown and the fine hybrid Catawbiense varieties raised in this district far superior to any others.

Considerable business is done from these nurseries with the United States, and some consignments are sent annually to Australia and New Zealand. Facilities for shipment are good, Woking being on the Southampton main line, a short distance, the freight being ten shillings per ton to the docks, from whence there is a regular service of direct steamers twice weekly to New York.

The smaller illustrations in this article are by the camera of the National Nurseryman representative whose recollection of his visit under the intelligent guidance of the proprietor is exceedingly pleasant.

Business Movements

OAK HILL NURSERIES

At the Oak Hill Nurseries, in Franklin, Mass., owned by M. T. Twomey, a building and its contents, including a horse, carriages, hay, nursery stock, etc., were completely destroyed by fire August 7. The loss was estimated at \$5,000, with only partial insurance. Manager Timothy Buckley, George Boucher and three others were sleeping in chambers on the upper floor, but all escaped by jumping from windows.



View in the herbaceous section of Goldsworth Nurseries.

NOTES ON EUROPEAN NURSERIES

[The following interesting communication on European nursery conditions was prepared for the National Nurseryman at our request but was inadvertently laid aside and overlooked. We have persuaded Mr. J. McHutchison to allow us to publish it though badly belated.—Editor]

Here are a few notes which I promised to send you regarding my recent trip to Europe. I go there every year, but as your news columns have covered about every principal European source of supply for nursery stock in past issues, I will briefly note changes only as they affect the present situation.

ENGLAND,—Our nurserymen principally import from there Manetti, Gooseberries and more or less general nursery stock. Manetti will be scarce. All other stock will be in good supply. *Andromeda floribunda* is again being grown extensively. The English nurseries are now selling some varieties of *Rhododendrons* to the Hollanders instead of vice-versa as a few years ago.

HOLLAND,—In Boskoop, where there are about 800 nurserymen, 40 of which export to this country I noticed a marked change. The demand for stock during the past few years has been so great (partly owing to Germany's reduced tariff), that much stock is sold before it has had a chance to reach proper selling size. One American purchased last year 36,000 *Koster Blue Spruce* in all sizes from one to five feet. This popular variety, *Boxwood*, all sizes and shapes, *Tree Roses* and *Azalea Mollis* will be scarce and high-priced. *Clematis*, *Rhododendrons* and miscellaneous stock will be plentiful and cheap. Our increased tariff has not caused the Hollanders to bud less *Roses*, but we must remember that America is only one of their customers. They export to every European country, also to South Africa, Australia and South America. The largest nursery in Boskoop is perhaps only five or six acres in extent, but with their system of intense cultivation, that small acreage produces more perhaps than 25 acres under our less economical system. There are no plows or horses in Boskoop. Stock is moved from place to place in boats along the canals and every inch of the ground is dug and kept clean by hand labor.

At Oudenbosch where our semi-grown trees such as *Norway* and *Schwedler Maples*, *Lindens*, etc., are grown quite different systems prevail. The canals are missing, the soil is friable and sandy and the long, moist summer pro-



Beautiful conifers of many varieties in the Goldsworth Nurseries

duces this class of trees with smooth straight stems. There are perhaps 20 nursery firms there, four of which are exporters. During packing season, they dig the stock during the day and pack at night, the men working in shifts the whole 24 hours. This is the principal source of supply for semi-grown *Norway Maples*. Out of every 100,000 *Norways* grown, only 40,000 perhaps, are straight enough to ship, the remainder are either cut back for budding *Schwedlers* on or are staked until they become straight. This is a lesson for our American growers.

While in Holland I went from Boskoop to Haarlem (about 60 miles) on a motor cycle to see the large Horticultural show there. Our route took us through the bulb fields, hundred of acres of *Hyacinths*, *Tulips*, etc., in full bloom. The most attractive displays at the Exhibition were the large groups of forced new varieties of *Rhododendrons*, *Pink Pear* and *White Pearl*, clipped *Box* in many shapes from Aalsmeer and Boskoop. Large specimens of *Azalea Indica* in many varieties, also forced *Azalea Mollis*. It would take more space than you could spare to merely mention the striking exhibits.

GERMANY exports very little nursery stock to this country. They buy largely at the same sources as we do. America's principal imports from there are *Lily of the Valley* Pips for Florists forcing. Germany furnishes the worlds supply and America imports perhaps fifty million pips or about one-sixth of the total exports. This trade is fast increasing owing to our reduced tariff on them.

BELGIUM also furnishes us with very little nursery stock, but is the worlds supply in *Azalea Indica* for forcing—also *Bay Trees*, *Palms* and other Greenhouse stock. Around one city (Ghent) there are about 700 Greenhouse establishments. They export these plants all over the world of which America uses perhaps 20%. *Bay Trees* are grown in many formal shapes and the American nurserymen are now waking up to their usefulness.

FRANCE—All Fruit and Ornamental stock is scarce and high-priced this season. Prices for future crops of fruit stocks were 40% higher in May than in January. There will not be sufficient *Pears*, *Mazzards*, *Mahalebs* and *Myrobolands* to go round. While the French exporters are getting better prices for their products than three or four years ago, the prospects are not yet sufficiently attractive to make the supply meet the demand. Owing to the agitation

over plant pests the large exporting nurserymen claim that they will sell stock of their own growing only and not procure shortages of their neighboring nurserymen to complete orders as heretofore.

Throughout Europe land is rising in value. Labor is scarce and demands more pay and less work exactly the same as here. The cost of living, wood for packing cases and all kinds of supplies are increasing in cost every year. I mention this as many of our friends seem to think Europe is at a standstill. The fact is that Holland, Belgium, France and Germany are particularly prosperous just now and it always seems to me that they get more of the good things of life and get them easier than we Americans do.

Prospects for general business in the nursery line look unusually encouraging. The import business is a good barometer. Last year was the largest in the history of our firm and today we have twice as many import orders booked as at this time a year ago. All we need is safe, sane and practical legislation governing the inspection of nursery importations.

J. McHUTCHISON.

New York, June 10, 1910.



A general view in the fruit section of the Goldsworth Nurseries, Woking Surrey, England.

CONSOLIDATION OF SEED HOUSES

To Our Patrons:

On and after July 6, 1910, the headquarters of W. W. Rawson & Co. will be at 12 and 13 Faneuil Hall Square, our old location previous to 1906 and since that time the home of the H. E. Fiske Seed Co.

In explanation, will say that there has been effected a consolidation of three of the leading seed houses in Boston, namely Schlegel & Fottler, Co. H. E. Fiske Seed Co., and W. W. Rawson & Co., and the new corporation will have its headquarters at above address.

It is the intention of the new corporation to have one of the finest seed houses in the country and we cordially invite you to visit us and favor us with your continued patronage.

Thanking you for past favors, we remain,

Respectfully yours,

W. W. RAWSON & Co.

"An excellent trade paper."

THOS. MARKS & Co.,
New York.

Correspondence

ORCHARD HEATERS

Aug. 4, 1910.

NATIONAL NURSERYMAN,

Rochester, N. Y.

Dear Sirs:

In a recent issue of your paper we note you have copied an article on the subject of orchard heating. In commenting on this article you state that oil seems to be the fuel preferred. Now we would like to know just wherein this article you found any reference to oil being the preferable fuel to use? As a matter of fact fully ninety per cent of the growers who fire here use coal to fire their orchards and the per cent is constantly increasing in favor of coal. The best crops were saved in this Valley by the use of coal. This fact is self evident. The most losses where firing was done was where oil was used. This fact is self evident.

The greatest expense for firing was where oil was used. Now if you will please state wherein oil is found to be the



The "Cloche" or Bell Jar extensively used in propagating plants which do not strike readily in the Goldsworth Nurseries.

most preferable fuel to protect orchards with when the temperature falls to 18 above zero and stays there all night we will certainly thank you very much.

We now have several thousand of our new Jumbo coal heaters sold for spring delivery in this Valley. Our Jumbo Ideal holds fifty pounds and burns all night, and will without doubt sell the majority of the heaters sold here this season. We have by far, more of our coal heaters in use here than any other make. You surely must realize that a false statement like this appearing in your magazine does the orchard heating business and manufacturers of coal heaters a great damage.

Will you please insert this statement?

THE IDEAL ORCHARD HEATER CO.,
F. E. BARNEY, Mgr.

NOTE:—Our columns are open to the advocates of the oil heater also. Our correspondent makes positive but general statements. We shall be glad to receive the evidence.—EDITOR.

BELOW ARE PHOTOGRAPHS OF

CUPS PRESENTED TO WESTERN NURSERYMEN'S ASSOCIATION

BY THEIR EASTERN GUESTS IN TOKEN OF COURTESIES RECEIVED AT DENVER CONVENTION

Engraving on Solid Silver Loving Cup.
Nine Inches High.

Presented to the Western Nurserymen's Association by the Eastern members of the American Association of Nurserymen attending its 35th Annual Convention, Denver Colo., June 8 to 10, 1910, in grateful recognition of the courtesies shown and entertainment provided.

HARLAN P. KELSEY, *Chairman*,
J. HORACE MCFARLAND,
FRANK B. WHITE,
JOHN C. CHASE,
L. A. BERCKMANS.

SPECIAL COMMITTEE.



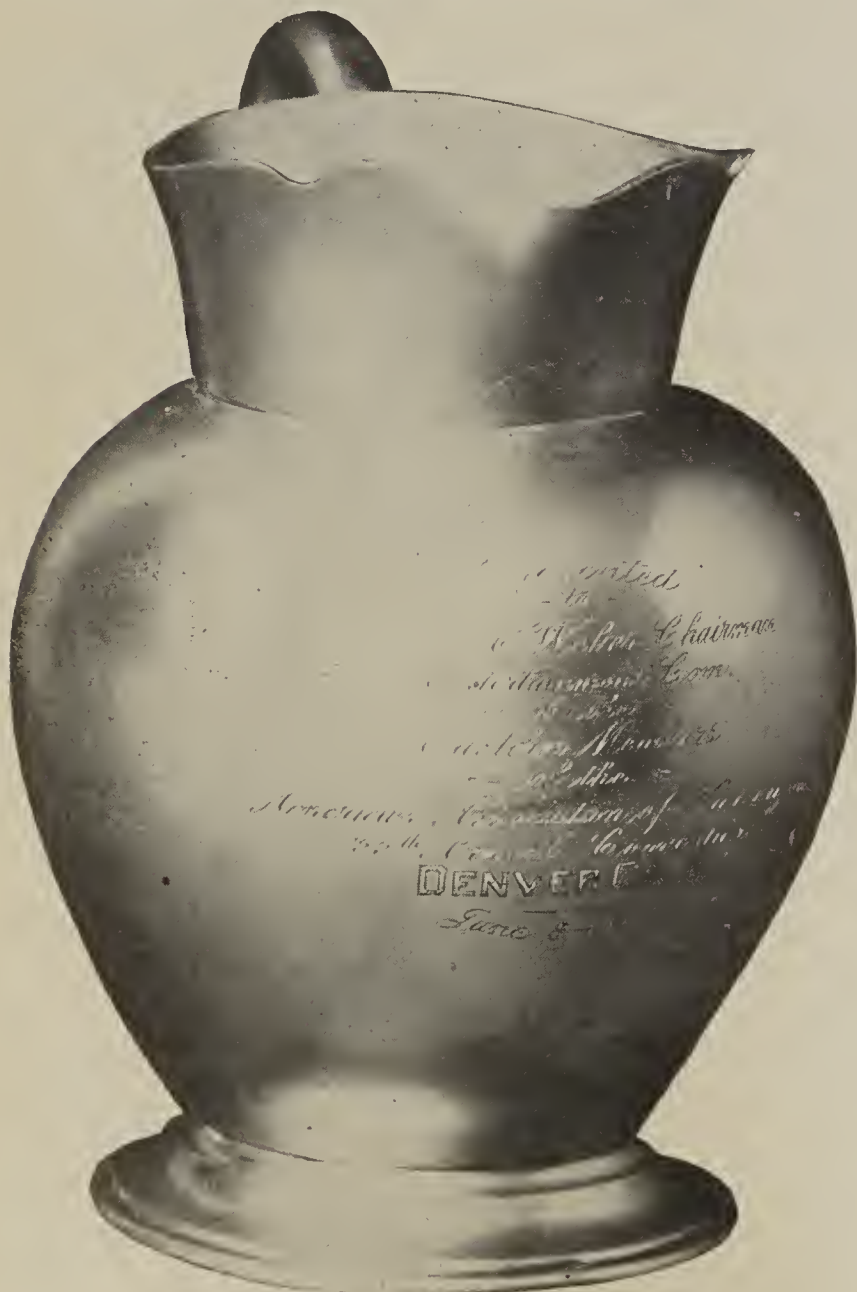
ASSOCIATION CUP

Engraving on Old Pewter Pitcher. Nine Inches High.

Presented to Frank A. Weber, Chairman of the Entertainment Committee, by the Eastern members of the American Association of Nurserymen, 35th Annual Convention, Denver, Colo., June 8-10, 1910.

FRANK A. WEBER, *Chairman*,
ALBERT A. FERGUSON, *Local Chairman*,
CHARLES FERGUSON,
GEO. B. FRAVERT,
C. RENO ROOT,
FRANK H. STANNARD,
JOHN A. VALENTINE,
PETER YOUNGERS,
JAMES W. HILL,

ENTERTAINMENT COMMITTEE.



WEBER CUP

J. J. Norton of Dansville, N. Y., called at the office of the NATIONAL NURSERYMAN, Sept. 1st, also several Rochester nurserymen.

PACIFIC COAST NURSERYMEN HOLD IMPORTANT SESSIONS AT WALLA WALLA, WASH.

The meeting of the Pacific Coast Nurserymen at Walla Walla on July 13, was well attended and promised to be of unusual importance. The reports were received too late for our August issue. The important resolutions are presented below.

The Pacific Coast Nurserymen's Association adopted the following resolutions:

"Resolved, That the quoting of prices in nursery advertising is demoralizing to the interests of all legitimate nurserymen, and should be discouraged, and we recommend that we lend our moral and substantial support to such journals as uphold our interests by refusing to publish such advertisements."

The resolutions were introduced by C. J. Atwood, of Toppenish, and their adoption was unanimous. Following is the address of Mr. Brownell, which resulted in the presentation of the resolutions:

"Mr. President, Brother Nurserymen: We regret exceedingly that our time the past few weeks has been so fully occupied. We have been unable to give this exceedingly important subject the thought, inquiry and preparation it deserves.

"We will, however, give you in a few words, our ideas on the subject, by way of introducing it, and trust it may be discussed fully.

"It is our firm belief that the quotation of prices in nursery advertising is detrimental, not only to the best interests of the party advertising prices, but also to their competitors, their customers and the horticultural interests at large.

"It is detrimental to their own interests as it has a tendency to cheapen their product, not only in price, but also in quality—for that must follow in the general order of things—and in cheapening their product the tendency will be to cheapen the product of their competitors, who will no doubt meet their prices with one just a little lower, and so a merry war will be begun, which may result in a complete demoralization of prices and depreciation in the quality of stock grown.

"It is detrimental to your customers and horticultural interests generally in as much as it is not cheaper prices that are needed by the planter, but better service and better stock, and we believe the competition among us should be along the line of service and quality and not in prices.

"During the nineties, when most of the nurserymen of the northwest were practically bankrupt, two neighboring nurserymen who were practically in that condition were discussing ways and means whereby they might weather the storm. A said he should cut down the expense of growing to a minimum, or in other words, 'put as little work on stock as would possibly make it salable. Sell at a low figure and make the low price his chief feature in advertising.'

"B, on the other hand, thought quality and service would win in the long run, and stated his intention to continue to put all the work necessary on his stock to make it strictly first class in every respect.

"After ten years of struggle and hard work, A was still heavily in debt, and was glad to finally sell out his business, as it was not profitable. While B had entirely paid off a still heavier indebtedness, and had a good paying business.

"Most of our horticultural journals now recognize that price quotations are not advisable, and that the majority of our nurserymen do not favor them, and have respected our wishes in this matter. We highly appreciate the stand they have taken as we know it has in some instances resulted in considerable immediate loss to them, and we think they merit a very generous support from us when we place our advertising matter."

Other resolutions of the Pacific Coast nurserymen were as follows:

An interesting discussion was precipitated when F. A. Hartley gave a short talk on the relationship of the work of the horticultural commission to nursery interests.

This talk caused considerable discussion as to the manner of reporting shipments to the horticultural commissioner and to inspectors. There is a state law requiring every shipment of nursery stock to be reported to the horticultural commissioner and also the inspector that has charge of the district in which the goods are to be shipped.

The principal discussion was as to the proper way to make these reports and it was finally decided by the resolution committee that all reports should be turned in on post cards or mailed on heavy paper the size of a post card, and that they should all bear the information, such as the date of shipment, the destination, and the kind of plants shipped. The other resolutions presented by the committee and passed on by the meeting were as follows:

RESOLUTIONS

"To the Pacific Coast Association of Nurserymen, in Convention at Walla Walla, Wash., July 13, 1910:

"We, your committee on resolutions consider—

"First. In as much as our very efficient secretary, Mr. C. A. Tonneson, is largely responsible for the success of our organization, and in as much as he gives a great deal of time each year to planning for the annual meetings, and in as much as the work is continually growing, be it resolved, that his salary for the next twelve (12) months be set at ten (10) dollars per month, not that we consider this sufficient compensation, but as a slight mark of our appreciation of his untiring efforts in our behalf.

"Second. Resolved, that all members of the Pacific Coast Association of Nurserymen eliminate from their contracts and written or verbal orders, all agreements to replace stock.

"Third. Resolved, that the date of our annual meeting be changed to the first Wednesday on or after the 20th of June of each year.

"Fourth. Resolved, that our president consider carefully the personnel of the transportation committee, selecting as far as possible, men who are experienced in dealing with railroad officials, and that as few changes be made in the transportation committee from year to year as is possible, with a view to securing from their work the greatest benefits.

"Fifth. Resolved, that our transportation committee be requested to give particular attention to the following necessary work:

"(A). Endeavor to secure from the traffic association car rates on 'part lots.'

"(B). Take up with the O. R. & N. railroad the matter of a more prompt freight schedule on nursery stock; also with any other lines against which there seem to be any complaint.

"(C). Take up with the S.P. and O. R. & N. railroads the classification of nursery stock, endeavoring to secure from them on application of the western classification covering minimum weights, etc., as used by the Northern Pacific and certain other transcontinental roads.

"(D). Employ competent party to prepare schedule of car and less than car rates on nursery stock from and to certain central shipping points in coast territory to be suggested by transportation committee, and to also furnish classification of nursery products in their respective classes as 'plants,' 'shrubs' or 'trees' for the guidance of our members, copy to be supplied each.

"Fifth. In as much as it has become the practice of some of the seedling dealers to sell seedling stocks and grafts indiscriminately to many farmers or orchardists who are growing a few trees as a side line; and in as much as these men are not and never intend to be nurserymen, but are simply endeavoring to grow a few varieties of trees to sell at such prices as it will bring; and in as much as this practice is demoralizing the nursery business of the coast and is shortsighted on the part of said dealers and unjust to their nursery customers who buy from them in large lots.

"Therefore be it Resolved, that we, the Pacific Coast Association of Nurserymen condemn such practice and refuse to patronize such seedling dealers and to hereafter confine our purchases of seedling stocks to the dealers who sell only to the nursery trade;

"And be it further, Resolved, that a copy of these resolutions be sent to each of the seedling dealers of the United States, and that a copy be printed in the NATIONAL NURSERYMAN."

COMMENTS ON PROPOSED NURSERY IMPORT INSPECTION BILL. AN OPEN LETTER

New York, May 2d, 1910.

Committee on Agriculture, H. R.,
Washington, D. C.

Dear Sirs:

With more than thirty years of practical experience in the nursery business and somewhat intimate knowledge

of the conditions of both the domestic and foreign business, permit me to call your attention to some of the impractical and inconsistent features of the Simmons Bill, H. R. 23252, now before you.

1st.—It is absurd for any nurseryman or importer doing an extended business to make "an application stating the number and kind of nursery stock to be imported," unless duplicates of all orders placed for foreign stock, whether by cable or letter, be transmitted to the Secretary of Agriculture;—a technical proceeding of governmental interference with private business, as unreasonable and unnecessary as it is inconsistent with the spirit of our form of Government.

2d.—In Section 7, the provision for detention "in quarantine a necessary time to determine the result of such disinfection" would, in practical workings result in most cases to simple and direct confiscation—an object presumably not intended by the advocates of the bill nor one that would, if thus understood, be tolerated by you.

3d.—The authority conferred upon the Secretary of Agriculture "to quarantine against any importations from said district" is a dangerous precedent, an arbitrary and wholly unjustifiable imposition, which, in effect, might cause needless injustice and loss; and in view of the other protective features of the bill would, unquestionably do much more harm than good. Indeed, in case of fright or a wave of hysteria with subordinate officials, very serious injury would follow without any compensating benefits.

The desirability of an efficient national law for the proper regulation of nursery stock importations in co-operative harmony with the approved inspection laws of the states, is by the progressive men in the nursery business generally recognized: But, I beg to submit that care should be taken in conferring arbitrary power and creating new conditions, not to make the proposed remedy worse than the insect pest diseases which the law aims to prevent.

Unless the bill is amended in the sections above indicated it is quite within the possibilities and quite probable that this may be the result.

Very respectfully,

(Signed) FREDERICK W. KELSEY.

GEORGIA PEACH CROP

It appears as a result of the season's experience that the Fruit Producers Exchange was a material aid in handling in a profitable manner the large Peach crop harvested in Georgia the past season. Lime-sulphur too played an important part in warding off rot and curculio. Georgia peach growers are feeling encouraged.

PERSONALS

C. C. Mayhew of Sherman, Texas, spent two weeks in Rochester in July, visiting the Nurseries in Western New York.

J. H. Dayton, of Storrs & Harrison Company, Painesville, Ohio, spent a few days in Rochester the first part of August, and called on his brother nurserymen in the Empire State.

VARIETIES

Too Many Propagated by Nurserymen

Read at Denver Meeting by E. S. OSBORNE, Rochester

The question of varieties is one that can be discussed from several points of view. The point that I wish to draw to your attention is the number of varieties that are catalogued by the different firms who issue catalogues. It seems to me that we are all inclined to catalogue altogether too many varieties of almost every class of stock.

Take apples for instance—you can take a dozen different catalogues, count up the number of varieties catalogued and you will find all the way from sixty to two hundred. It seems to me that even sixty is altogether too many. How much better it would be for all of us if we could confine ourselves to say thirty or forty of the very best sorts and eliminate all of the balance. It would make it a great deal easier for everyone connected with the business. It would reduce their chances for errors in both budding and grafting, also the errors that occur in filling the orders.

I appreciate the fact that it would be impossible to make a uniform list of apples of thirty or forty varieties that would fit every section of the country. I am also aware of the fact that our Western brethren grow and sell in large quantities a number of varieties that are very seldom sold in the East, while we in the East grow and sell a number that are never sold in the West. This, however, should not deter us from striving to reduce the number of varieties which we publish in our catalogues as we can confine ourselves to the leading varieties sold for commercial purposes in the sections of our country where we do business.

I am of the opinion that this would be a step in the right direction and I hope you will consider the matter when compiling your next catalogue. In compiling our latest catalogue I kept this idea in mind and reduced the number of apples from seventy-eight to seventy varieties and I also realize that we could have cut it considerably more without injuring the value of the catalogue in any way and it is my intention, in our next issue, to cut it even further.

The same thing holds good with pears, cherries, plums, and especially peaches. On referring to a stock catalogue, I find one hundred twenty-four varieties of apples. We all know that it is almost impossible to get together every season such a large number of different varieties of apples

and especially where a whole season's orders mean about twenty-five to fifty varieties that are sold only from one up to a dozen of these odd kinds.

I think the time has come when the people want quality not only in the stock itself, but in the varieties that are offered for sale by the nurserymen and there is no question in my mind but that there are a large number of varieties that have very little if any merit, that are sold every year simply because some firm catalogues them in order to have a catalogue that might lead the customer to believe

that the nursery is an exceptionally large one on account of the long list of varieties of different classes of stock. Take the grand total of trees that are sold for commercial purposes and I think that you will find that seventy-five percent of the trees used will be confined to from fifteen to twenty varieties. I am speaking now of apples. If this be true, then the big majority of the long list of varieties that I am sure we all sell, are sold in small quantities of from one to five or six trees and in a great many instances the purchaser does not know the variety and could not tell it if he saw the fruit. The only reason he buys it is on account of the glowing description seen in some catalogue or some variety his grandfather had when he was a boy. I am sure we would be doing an endless amount of good not only for ourselves but to future generations if we would strive to eliminate from our catalogues and cease growing, all varieties which do not have a commercial or some



Training a dwarf apple in typical vase-shape form, Goldsworth Nurseries.

distinctive value.

I find on referring to our Spring stock book, that we sold one hundred sixteen varieties of apples. Not because we catalogued that many, but because our customers from one source or another, had heard of the varieties asked for and insisted on having them. We can educate our salesmen to confine their sales almost exclusively to the varieties catalogued by us and if we will all make an effort to reduce the number of varieties that we publish in our catalogues, the growing and handling of fruit trees in the future will be considerably easier than it is at the present time and has been in the past.

I have prepared a table showing just how the one hundred sixteen varieties of apples sold by us were proportioned in the total sale of apples. I find that the

seven leading varieties, which by the way were Baldwin, King, Northern Spy, North Western, Greening, Stayman's Winesap, Wealthy and Yellow Transparent, represented 44 percent of the total number of apples sold by us. This represented 6 percent of the varieties. The next eleven leading varieties represented 27 percent of the total apples sold and 9½ percent of the varieties. The next thirty-three varieties representing those that amounted to from 100 to 500 trees each, was 24 percent of the stock and 28 percent of the number of varieties. The next lot, 50 to 100 represented 4 percent of the stock and 16 percent of the varieties. The next figures taken were 25 to 50 of a kind and there were 17 kinds representing 2 percent of the stock and 15 percent of the varieties. I find 29 varieties of from one tree to twenty-five each, representing seven-tenths of 1 percent of the number of trees sold and 25 percent of the varieties.

I believe from the above table that we can easily get along with from forty to fifty varieties of apples, as you will observe that fifty varieties out of the total of one hundred sixteen varieties sold represent 95 percent of the stock sold, while the other 66 varieties represent only 5 percent. I think if you will take the trouble to figure over your own stock book that you will find the same condition exists with you as does with us and I am sure you will find that it will be greatly to your advantage to eliminate those varieties that are sold in such small quantities. It stands to reason that if the fruit grower who is growing stock for a profit determines upon certain leading varieties, that those varieties are certainly the best and good enough for any person to plant for home consumption. I hope you will give this matter serious consideration and see if you do not agree with me that we will be benefitted if we all strive to reduce rather than increase the number of varieties catalogued by us.

MEETING OF SOCIETY OF AMERICAN FLORISTS AND ORNAMENTAL HORTICULTURISTS

Rochester florists were hosts to the members of the National Society which met in Convention Hall, Rochester, August 15th to 19th.

The meeting was one of the most successful in the history of the organization and was as thoroughly enjoyed socially as it was appreciated from the standpoint of the professional grower.

Messers Vick, Keller, Charlton, and other Rochester nurserymen florists were the busy men of the convention, and contributed largely to its success.

A number of out of state nurserymen were in attendance. Among these were Orlando Harrison and J. H. Harrison, Berlin, Md., Wm. Harrison, Painesville, Ohio, Edward and Robert George, Painesville, Ohio, J. C. Vaughan, Chicago, Ill., Jas. McHutchison, New York, J. A. Valentine, Denver, Colo., and many others. The New York delegation of nurserymen came in a special train, some one hundred strong. The west and middle west were also well represented.

CONNECTICUT NURSERYMEN

Below is a photograph of members of Connecticut Nurserymen's Association, taken on the grounds of the Elm City Nursery Co., New Haven, Conn., where the Association met for a field day on August 11th. After spending a pleasant morning exploring the nurseries the members took the trolley to Savon Roek, Connecticut's Coney Island, where they disposed of a well served dinner at the Colonnade after which the members played "kids" for the remainder of the day, taking in all the shows from the roller coaster to the flying horses.

It was voted unanimously that the day had been most pleasurably spent.



Connecticut Nurserymen at Elm City Nurseries.

ANOTHER APPRECIATION

THE NATIONAL NURSERYMAN,
Rochester, N. Y.

Gentlemen:

Your bill of recent date for our ad in the NATIONAL NURSERYMAN received. We are herewith enclosing check covering same.

We are pretty well sold out on everything that we have had for this year and therefore do not think it necessary to have ad appear in the September issue.

Can assure you that we are well pleased with the results that we received, and will not forget you next season.

Yours very truly,
MALONEY BROS., Wells.

T. W. Rice, who for several years has been secretary of Riee Bros. Co., of Geneva, N. Y., has sold his interest in the company to his brother, John P. Riee, and retired from the company. Business will be conducted the same as before by Riee Bros. & Co. C. W. Riee is the company's new secretary.

NURSERY CONDITIONS

INDIANA

Weather conditions have been very favorable the past two months with plenty of moisture, in fact a little more rain than we like. It interfered with the cultivating somewhat the past month.

Stock has made an excellent growth. Two year cherry are the best we have ever grown and will make up 90 per cent $\frac{3}{4}$ up. One year cherry are making their usual growth and foliage is splendid.

Peach buds, of which we have a larger supply than usual, have made an unusual growth and will make up largely in the two first grades. In fact, we will have to let up on the cultivation. While our supply of peach is larger than usual, the sales have been very heavy and the supply promises to be exhausted before the season is over, even at advanced prices.

Standard pear about usual supply and in very strong demand with quite a shortage in Kieffers.

Plums, fair supply of Japans in one year, which seem to be scarce, owing to a poor stand of buds.

Two year apple are very scarce and in strong demand, apple grafts very good stand and are making a splendid growth.

I do not think there will be any stock that will show a surplus in this section by the time spring delivery is over. While the price of cherry is somewhat lower our sales are much heavier than usual at this time of the year.

Budding stock has made a very good growth. We have 100,000 cherry buds set and find them working splendidly. We are setting about 16,000 to 20,000 per day. Have 300,000 peach to bud, and will commence in about 10 days. Demand for peach buds seems to be very heavy.

Retail sales through agents seem to be much better than usual. Even though prices have been advanced on almost all kinds of stock, we think from the reports we have that the retail trade is at least 25 to 40 percent better than last season at this time.

Vincennes.

W. C. REED.

The season with us has been fairly good. Plenty of rains, in fact more than we needed. Indications are now that we will have a fine lot of stock for fall. Cherry trees seem to be rather plentiful while we are finding quite a demand for all classes of other stock, especially, apple, peach and plum.

Bridgeport,

C. M. HOBBS & SONS.

KENTUCKY

Our growing season has been very backward, and in fact some stock has made very little growth. We have had continuous rains for the past seven weeks, that has made it impossible to cultivate. As to the surplus and shortage of stock we are short on many ornamentals, and have a surplus of California Privet, Spirea Van Houtti, Snowballs and pecans, as we grow a very limited stock of fruit trees we have no surplus, excepting a few varieties of cherry.

As to sales—our sales are behind last season at this time, but from the number of inquiries we are getting believe sales will be equal to last year before the season is over. Wishing you much success, I am,

Sparta.

J. F. DONALDSON.

IOWA

On account of the dry weather we are having, much of our stock will be lighter than usual, but everything is in a healthy condition. Our stand of new transplanted stock is, perhaps, a little lighter than usual, but we do not anticipate any great shortage in any line. We are speaking only of our immediate locality, not having had the report of others on the conditions elsewhere at this early date.

F. W. MENERAY,
CRESCENT NURSERY CO.

MISSOURI

Growth of trees—better than last season in spite of the check given by the freeze in the early spring. There has been a plenty of rain everywhere, and one year apple coming fast.

Quantity—Largest planting we have ever made.

Apple, plum, peach, will all be in good demand. Cherry, Concord grape, will be more than plentiful.

STARK BROS. N. & O. Co.

MARYLAND

The rains we had in June and also recently have been beneficial to all kinds of nursery stock.

Our peach trees especially have made a wonderful growth, and at this time are better than we have ever seen them before. The demand is good for both apple and peach.

Cherries are a little slow, and the price is off. Peach and apple are holding up, and we think they should continue, as prices have been entirely too low for many years.

California Privet is growing nicely and we have a fine stock to offer again this season.

Baltimore,

FRANKLIN DAVIS NURSERY CO.

Note and Comment

CO-OPERATIVE MARKETING OF FRUIT IN WESTERN NEW YORK

A movement which aims at the drawing together of the fruit growers of Western New York in the marketing of their products has been under way for some time. Last year a fruit grower's exchange was established with headquarters at Rochester. Fair progress was made and satisfactory returns were obtained for those who sold their fruit through this medium. This year much larger efforts are being put forth, with the object of interesting localities outside of Rochester in the organization of local branches which shall co-operate with the central clearing house. Meetings have been held in districts outside of Rochester, during the month of August, where the aspects of the co-operative selling methods have been freely discussed.

THE SHAKESPEARIAN VIEW OF THE ROOT GALL QUESTION

JAMES PARKER at Denver Meeting

I have been thinking that if our friend, Shakespeare, had lived in this age he would not have built a halo of immortal gloom about the precious head of poor Hamlet. He would have seen that the perplexing griefs of the ages are borne by the heroes we call nurserymen. "To be, or not to be," would not have been written. We nurserymen would much rather build up the country in which we live than explore that unknown country. If Billy Shakespeare could have heard this discussion about root gall I believe he would have been convinced that the uneasy paths of royalty which drove the noble Prince of Denmark to meditate suicide, are nothing as compared with the momentous problems we daily meet and are bravely trying to conquer.

Root gall or no root gall! That's the question
Which makes us doubt, like Denmark's gloomy Prince,
Whether 'tis nobler in the mind to suffer
The loss and toil that nurserymen are heir to,
Or to throw the whole caboodle up and quit
The risky business. To quit. To take it easy.
To rest. And by our resting say we end
The everlasting scramble and nightmare of dread,
Anxiety and labor. 'Tis a consummation
Devoutly to be wished. To quit. To loaf around.
Perchance to go a fishing. Ay, there's the rub!
For who can tell when fish will bite, or when,
Cold-footed, homeward we may plod our weary way
With naught to cheer the wifey. There's the respect
Which gives us pause and keeps us plodding on.
For who would bear this rush to be on time,
Railroad delays, the blizzard's icy touch,
The south wind's scorching heat, and the thousand
Petty hindrances inspection laws place on him,
When he might his quietus take with pole
And minnow hook? Who would in patience bear
To sweat and grunt with weary plow and hoe,
Even though his toil may help to feed the world
And clothe in blooming beauty many a home,
Were it not that the fear of being short on cash
Puzzles him still and keeps him plodding on!

Whether root gall is or is not an injurious disease, most of the nurserymen here will continue to grow trees. It is

the part of wisdom to meet conditions as they are, not as we would like to have them be. There is much difference of opinion even among nurserymen upon this question. Until we ourselves can agree it seems hardly fitting that we should pass a resolution condemning the position taken by men who are making the study of diseases of this character their life work. Admitting as true all the proofs offered here to-day that trees badly infected have lived and done well, we are not necessarily forced to the conclusions that root gall is not injurious. We nurserymen are a husky-looking crew and yet we have had the measles. Before making too much noise I think it would be a good idea to learn the size and position of the enemy's guns. It looks to me like the inspectors are behind the breastworks of public opinion and have got a dead bead on us. If we are to sell trees in the West it is up to us to learn to grow the sort of trees they want and not the sort we want them to want. If the inspectors continue to insist that a grafted apple tree should be perfectly smooth at the union, it is our business to learn how to put corsets on these unions and make them grow so they will look like the inspectors want them to look (Laughter). The most successful fighting small boy I ever knew took no chances on getting licked. He reasoned that one good stomach blow and a safe get-away was better than taking chances on a fight in which he might get the worst of it. I believe that the ultimate solution of this perplexing question will be that we nurserymen will learn to lessen the number of rough trees that are now thrown out as root gall by at least one-half, and that the inspectors on their part will learn to discriminate between root gall that is real trouble and the slight enlargements which are common in the healing of all wounds, to such an extent that many trees that are now thrown out will be passed as healthy trees. I believe when this matter is fully understood we will agree that there is such a thing as root gall that is injurious, but that the losses from this source will be so small that we can begin to try to love the inspectors as we should and we can then all be happy. I thank you. (Laughter and applause)

SUGGESTIONS FOR THE GROWER

Keep the cultivator moving if growth is desired. If it is not a question of saving moisture, it is to kill weeds.

It is not too late to stimulate a weak growth by using small doses of soluble fertilizer.

How about the mildew or the spots on the rose stocks? Have the spray gun loaded with Bordeaux.

Keep a sharp eye on the cherry and plum buds. Timely pruning is to be given as required.

Red rust on blackberry and black raspberry began to show last month. Plants so affected must be pulled out and burned. Spraying is of little value.

Apple and cherry stocks began to show mildew last month which will check growth and interfere with budding if allowed to run. Use Bordeaux mixture.

Keep a sharp look-out for aphid on one-year-olds. Dipping tips in whale oil soap diluted 1 to 5 is a somewhat slow but sure method of destroying the enemy.

Aphid on young orchards have been very troublesome in recent years. They are always worse during the dry seasons. Whale oil or summer wash of lime sulphur is effective.

Small infestations of San Jose scale may be eradicated by frequent applications of whale oil or kerosine emulsions. It is simply a question of persistence and thoroughness.



E. A. SMITH, Lake City, Minn.
Vice-President Jewell Nursery Co.; Vice-President American Protection Association,
Minn. 1910; Chairman Root Knot
Committee of Am. Association.

CUSTOMS APPRAISEMENTS

The majority of the customs reappraisements of imports of nursery stock this season have been simply advances by the addition of packing charges. The government insists that duty be paid on the packing.

EDITOR THE NATIONAL NURSERYMAN:

It may be of interest to your readers to keep in touch with the work that is being done by the Root Knot committee recommended by the American Nurserymen's Association.

The following constitute this committee to date, who have expressed their willingness to do what they could along practical lines: California, Geo. C. Roeding, Fresno; Georgia, L. A. Berckmans, Augusta; Indiana, C. M. Hobbs, Bridgeport; Iowa, M. J. Wragg, Des Moines; Illinois, Guy A. Bryant, Princeton; Kansas, J. H. Skinner, Topeka; Missouri, R. J. Bagby, New Haven; Montana, D. J. Tighe, Billings; Nebraska, G. A. Marshall, Arlington; Oklahoma, L. A. Lopeman, Enid; Oregon, Oregon Nursery Co., Orenco; Pennsylvania, Abner Hoopes, West Chester; South Dakota, Geo. H. Whiting, Yankton; Tennessee, H. W. Chattin, Winchester; Texas, J. S. Kerr, Sherman; Washington, Washington Nursery Co., Toppenish.

Assistants are desired from other states; also any information that will be of value and reliable, relating to experiments and experiences which could be used for reference by the committee. If parties having such information will address the undersigned it will be appreciated.

Yours truly,

Lake City, Minn.

E. A. SMITH,
Chairman of Root Knot Committee.

Our renewal shows our appreciation for your journal.
M. SCHWARZWALDER, West Virginia.

Mr. Frederick W. Kelsey the well-known Nurseryman of New York City, who has recently returned from an extended trip to the Canadian Rockies, Alaska, Pacific Coast and the Yellow Stone Park, says that the ravages of the Forest fires throughout the Northwest are of alarming extent.

"From my personal observation" said Mr. Kelsey, "in more than 8000 miles of travel from Montreal to Vancouver, through Puget Sound, the Columbia River and other sources of our National timber supply, I am impressed with the imminent danger of a lumber famine before many years in this country, even should a recurrence of the present forest fires be prevented."

Mr. Kelsey has been appointed by Governor Fort one of the Delegates to represent New Jersey at the National Conservation Congress, St. Paul, Minn., 5th to 9th September.

"THE NATIONAL NURSERYMAN" has received a card from Henry B. Chase of Huntsville, Alabama saying that D. S. Lake of Shenandoah, Iowa, Mrs. Chase and himself are having the greatest time of their lives touring France. August 3rd they were in Angers, which they say is a city of great historic interest aside from the nurseryman's interest in it. They enjoyed a seventy mile spin in an automobile through the nursery plantings and were favorably impressed. They report the roads "the best ever."

The next meeting of the society is scheduled for Baltimore. There was a lively competition between Chicago and Baltimore for the meeting.

L. Smoots is conducting a prosperous nursery business near Springfield, Mo., where his brother, John Smoots, also has a farm.

Couldn't do without THE NATIONAL NURSERYMAN.
STRAND'S NURSERY.



J. W. SCHUETTE, 5600 Gravois Avenue
St. Louis, Mo., Chairman of Exhibits.

The National Nurseryman

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The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States, Canada and Europe.

Official Journal of American Association of Nurserymen.

AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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ROCHESTER, N. Y., SEPTEMBER, 1910.

AMERICAN ASSOCIATION OF NURSERYMEN.

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CO-OPERATION WITH ENTOMOLOGISTS—J. W. Hill, Des Moines, Ia.

PROGRAM—J. H. Dayton, Painesville, O.

PUBLICITY—Orlando Harrison, Berlin, Md.

EXHIBITS—J. W. Schuette, 5600 Gravois Ave., St. Louis, Mo.

ARRANGEMENTS—John Hall, Rochester, N. Y.; J. H. Dayton, Painesville, O.

F. A. Weber, Nursery, Mo.

EDITING REPORT—John Hall, Rochester, N. Y.; Prof. John Craig, Ithaca, N. Y.

ENTERTAINMENT—F. A. Weber, Nursery, Mo.

FORESTRY—A. J. Brown, Geneva, Nebr.

CO-OPERATION WITH FRUIT GROWERS AND ASSOCIATIONS—J. M. Irvine, St. Joseph, Mo.

TRADE OPPORTUNITIES—Jefferson Thomas, Harrisburg, Pa.

NURSERYMEN'S SHARE IN CIVIC IMPROVEMENT—J. Horace McFarland, Harrisburg, Pa.

ROOT-KNOT—E. A. Smith, Lake City, Minn.

MEMBERSHIP—John Watson, Newark, N. Y.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckman, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.

American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.

Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.

Connecticut Nurserymen's Association—President, C. W. Atwater, Collinsville, Conn. Secretary, John S. Barnes, Yalesville, Conn.

Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.

National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.

National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O. secretary, W. B. Cole, Painesville, O.

Pacific Coast Association of Nurserymen—President, C. Malmo, Seattle, Wash.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.

Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.

Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.

Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.

Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

THE ANNUAL REPORT

The annual report of the American Association of Nurserymen was distributed some two weeks ago. Secretary John Hall has turned out an exceedingly creditable document. There are several points worthy of note in this connection. First, the report was issued promptly. Thirty days from the time of receiving the stenographer's transcript, the report appeared. This is a splendid record. Second, it is typographically satisfactory. The proof reading, editing, and indexing are all that could be desired. In other words, the information which it contains is available. Third, it contains a large amount of valuable subject matter. Every nurseryman in the country can afford to spend some time in perusing it. He will find useful information. The Association and Secretary Hall are to be congratulated on the contribution of 1910 to the record of the proceedings of the American Association of Nurserymen.

A PUBLICITY CAMPAIGN

At the last meeting of the American Association of Nurserymen, considerable interest was evinced by the members in the matter of conducting a publicity campaign for the development of the fruit industry of the country. A special committee furnished with a substantial appropriation was appointed for this purpose. The committee was authorized to go ahead and carry on as effective a campaign as possible. The committee is now considering ways and means. The committee would like to receive suggestions from members, both as to methods of procedure and features in the nurseryman's field which ought to be prominently treated. The chairman in charge is Orlando Harrison of Berlin, Maryland, and it is needless to say that all those who have ideas to offer may freely write to Mr. Harrison and indeed are invited to do so as promptly as possible.

GARDEN LITERATURE

One of the gratifying phases of horticulture in this country is the growing taste for good literature on the subject. America has not reached the stage of advancement of England in this respect, but is rapidly gaining ground. The field for good horticultural literature is rapidly extending.

A few years ago there was little demand for a book which did not deal with gardening topics from the purely practical or commercial aspect, but recently with the development of sentiment, ideals, and a body of thought bearing upon country life interests and attractions, there has appeared a desire, nay more, a demand for books which suggest, inspire and entertain, as well as those which merely instruct.

GARDENS OF ENGLAND

A volume of this kind is that which lies upon our desk, bearing the title just given. It is a book of high aesthetic and attractive literary quality. It is a book one likes to have upon his shelves and enjoys looking through its leaves. It is a book of two

parts. One part consists of a series of paintings—beautiful reproductions in color—by Beatrice Parsons. The other part—the text—is attractively written by E. T. Cook. In the opening chapter on Thoughts on Cottage Gardens, Mr. Cook sounds the keynote lying at the root of the success of English gardens when he says, “There is a love of flowers fast knit into the very fibre of our British nature which probably lies at the root of the national reputation for gardening with which we are accredited.” This love of flowers has not been a plant of rapid growth, but rather one of slow development. It had its beginning back in the Saxon days when a man’s home was his castle, and his castle must in effect be a military fort. Within the walls of his castle were the things which he desired to protect. Herein lay his vegetable garden, his fruit orchard, and herein was included the flower garden of the housewife. Such close intimacy made for the development of a sympathetic relation between the gardener and the plants cultivated. This relation has strengthened as the years have gone by, and today no English home is complete without its garden, either small or large, modest or pretentious. Mr. Cook well says, “It is in fact the love of flowers pure and simple, not landscape or schemes of color, nor display of art, still less commercial value, that permeates the typical English garden and forms one strong connective link between all ranks of English people.”

This attractive volume contains chapters on Lavender and Rosemary, The Herb Garden, The Rose Garden, The Heath Garden, and a garden for each of the four seasons of the year. There are some twenty beautifully colored plates illustrating garden features and handsome garden plates. No book which has come to our table in recent times makes such a strong appeal to the aesthetic and sentimental sides of gardening. The closing chapter on Winter in the Garden brings to view many unthought of beauties associated with this period of the year, which it would be well not only for the heedless plantsman to read, but for the person who already believes that he possesses a sufficient appreciation of the garden in all her seasonable moods.

THE FAKER AT WORK A nurseryman sends us the following as having been received by him from a correspondent: “Some nurseries are offering pecans ‘3½ inches long’. They ‘claim’ this size is produced by crown grafting on Siberian stock, thus getting a flat (spreading) root instead of the long old tap root. Now this looks pretty fishy to us, and we know if there is anything in this claim that you will have the goods for sale.”

This appears to be the same old story but in a new guise. Siberia has had to bear the burden and stigma of many real wrongs and tragedies, but in nursery exploitation has been made the scapegoat of the unscrupulous. It is certainly curious how the name Siberia, suggesting as it does trial and tribulation by reason of its political associations and its climatic vicissitudes, should be masqueraded for one purpose or another, usually, however, in an endeavor to mislead the public.

We have had the name Siberian connected with nearly all kinds of fruit stocks, for everything from apples to gooseberries have at one time or another been presented to the public firmly established on a frost proof Siberian stock. In the cause of hardiness and adaptation even thorns and oaks have been invoked, and now we have Siberian stock for pecans! It is not even necessary to consider the fact that the pecan is exclusively an American tree, and that its nearest European relative upon which it possibly might be grafted is the walnut, which is not a native of Siberia. The modified tap root is another creature of the imagination, but these songs, like “bush” strawberries, “tree” gooseberries, “frost proof” peaches, “curculio proof” plums, are all to be regarded as specialties of that useful and versatile individual known as the “tree missionary.”

Look out for pecans on Siberian roots! If you can corral one send it to the office of the editor of the NATIONAL NURSERYMAN so that it may be carefully inspected and duly admired.

CHERRIES HEALTHY AT WINCHESTER, TENN.

Editor NATIONAL NURSERYMAN:

Recently we have noticed comment to the effect that some of the large growers of cherry (nursery trees) are having trouble with sour cherries shedding their foliage early in the season and stopping growth. Lest buyers of cherry trees should get the impression that this is generally true, we desire to say through your paper that cherry trees in our section have done remarkably well this year, and are still holding their foliage and making nice growth.

Our trees are doing so well that other nurserymen visiting this section speak of them as looking like the “old time cherry,” or in other words, like cherry trees grown some years ago when cherry trees were as easily grown as other stock. Our stands are good this year, and as stated above, the trees are exceptionally fine. The demand for cherries has also been far better than we expected, and we now anticipate a good demand for them.

Peach trees this season are extremely scarce throughout the whole country. Dormant peach particularly has not given good stands, as a rule. Our trees have done unusually well, however, and are really finer than any we have seen elsewhere.

The demand for peach this season has been heavier than we have known it for many years, and already we have sold a good portion of our peach. These are going at much better prices than heretofore, and prospects look bright as regards peach sales.

In fact all nursery stock with us has done exceptionally well this year. The seasons have been favorable, for the most part, and the trade seems to be good. We anticipate a business several times as large as last season.

Very truly yours,

TENNESSEE WHOLESALE NURSERIES, INC.,
AUBREY FRINK, Manager.

Quiz Column

THE LOGAN BERRY

Tazewell, Tenn., Dec. 11, 1909.

NATIONAL NURSERYMAN,

Rochester, N. Y.

Gentlemen:

Would like a little information if you care to give it and shall highly appreciate same.

1. Do you know anything about a berry called the Logan Berry cross blackberry and raspberry.

If you cannot tell me can you refer me to a party that can. I want to know its origin and if it will pay to raise them.

2. I would like the address of a nursery sending out good illustrated catalogue of fruits of general line.

R. N. PLANK.

ANSWER

The raspberry or so called raspberry, called Loganberry, is as you say a supposed cross between the blackberry and raspberry produced by Judge Logan of California some years ago. Its habit of growth is vigorous and in a general way it resembles the red raspberry. It is grown very successfully in the Northwest Pacific from Victoria southward to British Columbia. It is also grown and appreciated, we may say, in Britain where it appears to be well adapted to soil and climatic conditions. It is not sufficiently hardy for cultivation in New England on the Northeast and would certainly not succeed in the Middle West. Whether it could be grown successfully in Tennessee we are unable to say but you might secure this information by applying to the Experiment Station officials at Knoxville. A full description with the history of the origin of this berry is to be found in "Bush Fruits"—Card—published by the Macmillan Company, and also in a recent bulletin by the Washington Experiment Station, Pullman.

Replying to your second question, if you will consult the advertisements of the NATIONAL NURSERYMAN and send a post card to the leading advertisers you will undoubtedly obtain catalogues which will furnish you with samples of excellent literature of this type. You will hardly make any mistake in selecting any advertisers in our columns.

EDITOR.

CONNECTICUT NURSERYMEN

At the last meeting of the Connecticut Nurserymen's Association C. W. Atwater, Collinsville, Conn. was elected president and John R. Barnes of Barnes Bros., Yalesville, Conn. was elected secretary.

Business Movements

GIRARD, PA.—Our sales at this time are excellent. We are budding the largest and finest block of peaches it has been our pleasure to grow. We have a very large assortment of all kinds of ornamentals, which are making a very satisfactory growth. Prospects look very good indeed.

PENNSYLVANIA NURSERY COMPANY.

Doings of Societies

SOUTHERN NURSERYMEN

"The Southern Nurserymen's Association met in its 12th Annual session at Knoxville, Tenn., Aug. 24, 25, 26, 1910 and the nurserymen of the south especially, along with the interested fruit growers attended and helped to make this the most profitable meeting yet held. This Association prides itself in discussing a class of subjects that are altogether practical.

The meeting was held in Morrill Hall on the ground of the University of Tennessee where extra facilities toward making the meeting a success are to be had.

While the Association meets principally for business yet the entertainment committee composed of Knoxville men provided social features which were heartily enjoyed. An especial invitation was extended to the entomologists of the different Southern states to meet with the Association.

Officers of Association: R. C. Berckmans, Augusta, Ga., president; W. A. Easterly, Cleveland, Tenn., vice-president; A. I. Smith, Knoxville, Tenn., secretary and treasurer.

We hope to present a full report in our next issue.

GRAFTED TREES AND NURSERY STOCK

[Advice to Growers by an English editor.]

Those who have charge of the plantations in which trees have been cut over and re-worked with other varieties or nurseries where young stocks are growing their inserted buds or putting forth shoots from grafts will do well at this time to look sharp after the weevils. We have had under our notice from widely separated districts evidence of serious damage to shoots by these pests. One grower sent us a bundle of shoots some four inches long which had been cut off from apple trees and, enclosed in a small box, one little weevil which it was thought was doing the mischief. This weevil proved to be *Rhynchites cocruleus*, commonly called the "twig-cutting weevil." This little weevil is shiny blue in color, and the one sent was about one-sixth inch long, not including the rather prominent snout. The female weevil bores a hole with her proboscis in the tender shoot and then cuts it off below the point in which the egg is deposited. All the shoots that we have received this season contained the oval yellowish white egg. The shoots die and fall to the ground, and when the little full-fed maggot enters the soil to pupate every shoot should be gathered and burnt at once. When many of the beetles are present the shoots should be well sprayed with arsenate of lead. It is possible that a strong smelling fluid such as H emulsion would do much to protect the shoots.

There are other weevils that do much damage in nurseries by eating the leaves, such as the oblong leaf weevil, *Phyllobius oblongus*. Where these are found to be present the stock should be sprayed with arsenate of lead immediately. Where it is found that the bark of the shoots is being eaten off the presence of the clay colored weevil, *Otiorynchus picipes*, may be suspected. This is one of the most destructive of weevils. Fortunately it cannot fly, and may be caught with grease band or be shaken off at night into sheets or even into inverted umbrellas, tipping the beetles out into paraffin. Arsenate of lead is useful against this pest also, but shaking them down is the better plan. Raspberries often have their shoots cut off in great numbers by this pest.

—*The Fruit-Grower, Fruiterer, Florist*, June 2, 1910.

DETROIT INDUSTRIAL EXPOSITION

This exhibition, promoted by the business men of progressive Detroit, took place between June 20th and July 6th. It aimed to draw attention to the attractive opportunities afforded manufacturers and others interested in industrial work by Detroit. We learn that it was a success in every sense of the word, under the management of Wm. G. Rose, J. L. Hudson and Chas. B. Sawyer, supported by an active committee of business men.

Among Experiment Station Workers

CALIFORNIA BULLETIN No. 203

This pamphlet is an exceedingly interesting one containing as it does the report of the Plant Pathologist who is also superintendent of the Southern California stations. The writer is interested in the diseases of orchard plants.

PEAR BLIGHT:—A considerable portion of this bulletin is devoted to a description of a campaign carried on in the pear districts of the Coast for the prevention of that most serious of diseases—pear blight. We learn that a force of from six to twelve men was kept in the field for two years under the direction of experts in cutting out and destroying of diseased trees or parts thereof. Over 750,000 pear trees were carefully inspected several times. The writer states that this was demonstrative work and the experiment stations have proved that the disease may be controlled by sanitation methods. He, however, is certain that pear blight "has by no means been eradicated from California, nor is it likely to be." The future of the industry is in the hands of the fruit growers. If neglect prevails pear growing is likely to become a thing of the past. If cooperation and persistence are practiced the disease can be controlled. The Bartlett pear is the one variety which is most effected and many times the infection takes place on suckers which spring from the trunk. The recommendation is made therefore that the Bartlett should be top-worked on a variety which does not sucker and which is resistant to the blight. LeConte is one of the most promising varieties for this purpose.

WALNUT BLIGHT AND CULTURE:—As in the case of the pear so with the English Walnut blight is its most serious enemy. The disease is not susceptible to treatment by spraying methods and investigators now look for relief along the line of grafting on blight immune varieties or species. The so-called English (Persian) walnut as grown in California may be propagated on a number of different stocks. Both northern and southern forms of the Californian walnut provide congenial stocks. The Eastern Black walnut is also used and various hybrids between Californian and Eastern forms have also been employed. This line of work is new but it gives promise of considerable possibilities. In the case of orchards of varieties specially susceptible to the disease the recommendation has been made that this be top-worked with varieties which are more or less immune. Whether this will effect permanent relief is in our judgment an entirely open question.

Obituary

HENRY JAS. BOWDEN

Henry James Bowden, an expert accountant and interested in the nursery business of this city for many years, died early in August at the family residence, 32 Meigs Street, Rochester, N. Y., after an illness of four weeks. He leaves a wife, Mrs. Elizabeth Jackson Bowden; a brother, Edward Bowden, master of languages in the Modern School, Bedford, England; a nephew, Ernest J. Bowden of Vick Park B, and four sisters, all residents of England.

Mr. Bowden was born in Bedford, England, in 1848, his father being an instructor in the Modern School, where his brother now teaches. He came to this country in 1871 to visit relatives, but liked the country so well that he decided to remain. He entered the nursery business with Chase Brothers, in whose employ he remained for nine years, leaving the firm to start a business of his own. He formed a partnership with D. H. Patty, with whom he was associated at the time of his death. In 1873, he was married to Miss Elizabeth Jackson of Auburn. He was a member of Christ Church and was identified with several clubs.

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1909 and 1910

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We now have in stock VIRGINIA NATURAL PEACH SEED crop 1910, can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,
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YOU WILL BE ASTONISHED when you receive our beautiful catalogue and study our superb models at the *wonderfully low prices* we can make you this year. We sell the highest grade bicycles for less money than any other factory. We are satisfied with \$1.00 profit above factory cost.

BICYCLE DEALERS, you can sell our bicycles under your own name plate at *double our prices*. Orders filled the day received.

SECOND HAND BICYCLES. We do not regularly handle second hand bicycles, but usually have a number on hand taken in trade by our Chicago retail stores. These we clear out promptly at prices ranging from \$3 to \$8 or \$10. Descriptive bargain lists mailed free.

COASTER-BRAKES, single wheels, imported roller chains and pedals, parts, repairs and equipment of all kinds at *half the usual retail prices*.

\$8.50 HEDGETHORN PUNCTURE-PROOF SELF-HEALING TIRES A SAMPLE PAIR TO INTRODUCE, ONLY \$4.80

The regular retail price of these tires is \$8.50 per pair, but to introduce we will sell you a sample pair for \$4.80 (cash with order \$4.55).

NO MORE TROUBLE FROM PUNCTURES

NAILS, Tacks or Glass will not let the air out. Sixty thousand pairs sold last year. Over two hundred thousand pairs now in use.

DESCRIPTION: Made in all sizes. It is lively and easy riding, very durable and lined inside with a special quality of rubber, which never becomes porous and which closes up small punctures without allowing the air to escape. We have hundreds of letters from satisfied customers stating that their tires have only been pumped up once or twice in a whole season. They weigh no more than an ordinary tire, the puncture resisting qualities being given by several layers of thin, specially prepared fabric on the tread. The regular price of these tires is \$8.50 per pair, but for advertising purposes we are making a special factory price to the rider of only \$4.80 per pair. All orders shipped same day letter is received. We ship C. O. D. on approval. You do not pay a cent until you have examined and found them strictly as represented.

We will allow a cash discount of 5 per cent (thereby making the price \$4.55 per pair) if you send **FULL CASH WITH ORDER** and enclose this advertisement. You run no risk in sending us an order as the tires may be returned at OUR expense if for any reason they are not satisfactory on examination. We are perfectly reliable and money sent to us is as safe as in a bank. If you order a pair of these tires, you will find that they will ride easier, run faster, wear better, last longer and look finer than any tire you have ever used or seen at any price. We know that you will be so well pleased that when you want a bicycle you will give us your order. We want you to send us a trial order at once, hence this remarkable tire offer.

IF YOU NEED TIRES don't buy any kind at any price until you send for a pair of Hedgethorn Puncture-Proof tires on approval and trial at the special introductory price quoted above; or write for our big Tire and Sundry Catalogue which describes and quotes all makes and kinds of tires at about half the usual prices.

DO NOT WAIT but write us a postal today. **DO NOT THINK OF BUYING** a bicycle or a pair of tires from anyone until you know the new and wonderful offers we are making. It only costs a postal to learn everything. Write it **NOW**.

J. L. MEAD CYCLE COMPANY, CHICAGO, ILL.



Notice the thick rubber tread "A" and puncture strips "B" and "D," also rim strip "H" to prevent rim cutting. This tire will outlast any other make—**SOFT, ELASTIC and EASY RIDING.**

Fruit and Plant Notes

PEONY STUDIES

The Horticultural Department of the Cornell Experiment Station in coöperation with the American Peony Society has recently issued its third bulletin on peony studies. This bulletin corrects some descriptions given in an earlier publication, and adds accurate descriptions of some 250 varieties. Among the better known kinds which are found under various names in catalogues of nurserymen and about which the need of accurate information is pressing, the varieties mentioned below are among the more prominent. The descriptions and remarks on synonyms of these varieties will be appreciated by peony experts. This bulletin is available to all members of the American Peony Society and to all persons residing in New York State who are interested in peony culture. It may be secured by applying to the Department of Horticulture of Cornell University.

WHITE

ALBATRE

Species—*P. albiflora*.

Originated by Crousse, 1885.

Donated by Goos & Koenemann.

Description in brief—Large, milk white, compact, rose type bloom with wide central petals edged with carmine in very minute flecks; quite variable, however, and some blooms have a collar and develop into a crown bloom in the last stages of growth. Mid-season. Extra good commercial variety. Second to none for this type of bloom.

Description in detail—Not clearly differentiated, but petals next to guards have a slight yellowish tint. Occasional flecks on outer guards. Odor good.

Plant is a strong, vigorous grower, with long green stems. Very free bloomer in clusters.

Remarks—There has been some confusion in regard to "Albatre" and "Avalanche," but they are entirely distinct, "Albatre" being much higher class.

Points of difference—"Avalanche" has more of a lilac white tinge in center of bloom, not giving such a pure white general aspect as "Albatre." "Avalanche" does not stand up so well, the stems being weak at the base; is not so large a bloom, and is borne on smaller stems than "Albatre."

"Avalanche," although somewhat variable, is generally a typical crown. In most cases growers have sent "Avalanche" under both names and really have not "Albatre" in their collections.

ATROSANGUINEA

Species—*P. albiflora*.

Originated by Calot, 1850.

Donated by Peterson Nurseries.

Description in brief—Medium size, rosy magenta (169), medium compact, semi-double, with partly concealed stamens at collar and center of bloom. Midseason. Fair variety, not valuable for cut bloom.

Description in detail—The guards are not differentiated, outer guards are streaked with white. Odor unpleasant.

Plant is a strong, vigorous grower with a spreading habit, stems rather weak and dark green. Free bloomers in clusters with only an occasional blighted bud.

Remarks—This variety has been somewhat confused with similar varieties as it has been sent to the Cornell plots under the name of "Delache," "Jussier," and "Rubra Triomphans." It differs from "Delache" in habit. The latter is a very upright grower, while "Atrosanguinea" is spreading. "Delache" has a more compact bloom and does not show the stamens as plainly as "Atrosanguinea." "Delache" is also a few days later.

I OFFER 10,000 2 yr. old Carolina Poplars 4 feet and up. Get my prices.

W. C. BRYANT,

DANSVILLE, N. Y.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel

INDIANA HARBOR, IND.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

National Florists' Board of Trade, 56 Pine St., New York.

Peach Trees

and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of
ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES;
TWO YEAR CALIFORNIA PRIVET, CAROLINA
POPLARS, and CATALPA SPECIOSA.

WE INVITE YOUR INSPECTION.

Easterly Nursery Co.,

CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS.

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,

Salt Lake City, Utah.

"Atrosanguinea" is a taller grower and not inclined to blight like "Edouard Andre" with which it has sometimes been confused. "Rubra Triumphans" is a much looser bloom, nearly single, and more of a crimson than "Atrosanguinea."

"Jussieu" does not exist as a distinct variety, but is a synonym of "Atrosanguinea;" the same is true of "Atrosanguinea superba."

D'HOOR, AUGUSTIN

Species—*P. albiflora*. *Originated by* Calot, 1867.

Donated by Cottage Gardens Co., and Peterson Nurseries.

Description in brief—Large, medium compact, showy bloom; dark reddish pink (solferino red 4-5) [157] bomb type, with a slight silver reflex. Midseason. Good.

Description in detail—Clearly differentiated guards curving back to stem; the center of the bloom is a prominent bomb, with central petals wider than collar, but not forming a crown. Extreme center petals are linear, 1½ to 2 in. long; bloom entirely transformed. Odor lacking.

Strong, vigorous, medium tall plant, good habit. Medium bloomer in clusters.

Remarks—Not quite so compact bloom as "Felix Crousse" or "Victor Hugo," and possibly not so free a bloomer. The color of all three of these varieties is very similar. Possibly "Felix Crousse" is a little more brilliant than the other two. This variety has a more prominent collar than "Victor Hugo" or "Felix Crousse."

Synonym—This variety is often sold as "Marechal Maemahon."

EDULIS SUPERBA

Species—*P. albiflora*. *Originated by* Lemon, 1824.

Donated by Dessert, Goos & Koenemann, Cottage Gardens Co., and Peterson Nurseries.

Description in brief—Large, loose, dark pink (Mauve 2 [181]), crown type bloom; rather flat when full open. Early. Extra good commercial bloom.

Description in detail—Large, loose, flat crown with a few narrow lilac 1 (176) petals at collar. Large tuft of wide petals, same color as guards, surrounding a few narrow petals in extreme center of bloom; prominent collar. Odor pleasant. Same season and color as "Gen. Bertrand," but it differs in having a collar and crown, while "Gen. Bertrand" is a bomb; the latter is a more upright grower also.

Synonyms—Identical with the above are "Delia," "Edulis Odorato," "Rosa Lilacina," "Mamie Cutler," "Sylvanus," "Glorie de Douai," "Pizano," "Early Rose," "Acanum," "Sainfoin," and "Lilacina Superba." The above so-called varieties are synonyms pure and simple. No record can be found of the origination of any bona fide varieties under the aforementioned names; they should be stricken from the trade and this variety placed under the proper name, "Edulis Superba."

In addition to the above synonyms this variety has masqueraded under the following names, which in reality are standard varieties, and there should be no confusion between them and "Edulis Superba:" "L'Esperance," "Alexandrie," "Jeanne de Arc," "Rosa Plenissima," "Duchess de Nemours" (Guerin), "Jules Elie," "Gen. Bertrand," "Solfatare," "Comte de Paris," "Triomphe du Nord," "Triomphe de l'Exposition de Lille," and "Fragrans."

Remarks—There seems to be more confusion over this variety than any other, and it has been sent to the Cornell plots under each of the above twenty-three names; and in some cases "Edulis Superba" has come under three or four different names from a single nursery.

NEMOURS, DUCHESS DE

Species—*P. albiflora*. *Originated by* Calot, 1856.

Donated by Cottage Gardens Co.

Description in brief—Medium size, pure white, crown type bloom, sulphur white collar, no crimson flecks present. Early, two days later than "Festiva maxima." Extra good commercial bloom.

Description in detail—Clearly differentiated, narrow petals in collar, with wide petals forming crown, greenish tinge in central petals and no crimson flecks. Odor pleasant.

FELIX and DYKHUIS BOSKOOP, HOLLAND ROSES

Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina

A Full Line of Hardy Nursery Stock
Price List Free

FOR SALE

30,000 extra fine **PEACH**, leading varieties 5-8 and up. No. 1 2-year grapes, excellent roots and tops, very heavy.

PRIVET, 2-3, 3-4 feet.

All stock grown with greatest care and perfectly clean.

Virginia Nursery Company
PURCELLVILLE, VA.

North Carolina Natural Peach Seed

1910 Crop ready for Shipment about AUGUST 15th

We will handle both country run and re-screened seed this season and will be glad to quote you at any time.

HICKORY SEED CO., Hickory, N. C.

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our **HOLLAND NURSERIES**. Some of the goods on hand here during the packing season.

Notice to the Trade

Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

H. DEN OUDEN & SON

The Old Farm Nurseries

BOSKOOP, HOLLAND

PEONIES

Our lists of 100 choice varieties for 1910 have already been mailed; did you get your copy? If not, and if interested in peonies do not fail to send for one. No finer, more healthy stock to be obtained anywhere. Prices right.

J. F. ROSENFELD, Peony Specialist
West Point, Nebraska

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor
(Successor to Blair & Kaufman)

Reliance Building, Kansas City, Mo.

Offer for **SPRING 1910** large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

Plant is a strong, vigorous grower, medium height, good stem, and a rapid propagator. Very free bloomer in clusters.

Remarks—This should not be confused with "Duchesse de Nemours" (Guerin) which from the description in the catalogue of its originator is a "clear violet, lilac center" and has been greatly confused in this country with "Edulis Superba."

UMBELLATA ROSEA

Species—*P. albiflora*.

Origin unknown.

Donated by Cottage Gardens Co., and Dessert.

Description in brief—Large, informal rose type with violet rose 2 (154) guards and amber white narrow petals in center, with wide petals same color as guards found occasionally in center of bloom. Very early. Extra good variety for both landscape and cut blooms.

Description in detail—Blooms are very variable in form, varying all the way from anemone to rose on the same plant. Guard petals violet rose 2 (154) surrounding narrow, central petals of amber white, which fade to nearly pure white. In strong blooms carpels are entirely transformed and central petals are mixed with wide carpelodes same color as guards, which nearly conceal the narrow, white petals and fade in the sun to pale pink. Plant is a very strong grower, upright, and will stand heavy showers without support. Free bloomer in clusters.

Synonym—"Umbellata Rosea" was renamed by mistake to "Sarah Bernhardt." The same variety has also occurred under the name of "La France." There is such a variety as "La France," originated by Lemoine in 1901, but "Sarah Bernhardt" is simply a synonym of "Umbellata Rosea" and should be known as such.

B. G. PRATT CO., SCALECIDE CUPS

An excellent type of advertising is being conducted by our progressive manufacturers of fungicides, the B. G. Pratt Co. of New York City. They are offering prizes to horticultural societies in the various parts of the country for the best results secured by the use of scalecide in controlling insect enemies. The Company has thus far donated eighteen of these cups to horticultural societies throughout the country. The terms of competition are outlined in a circular available to all who care to apply for it. Interested persons should write to B. G. Pratt Co., 50 Church St., New York City.

SEVEN REASONS FOR FALL SPRAYING

One of the most interesting little booklets that has come to our notice in many a day, is one entitled "THE WHYS AND WHEREFORES OF FALL SPRAYING" issued by the B. G. Pratt Co., 50 Church St., New York City, manufacturers of "SCALECIDE." In about one hundred words Mr. Pratt has given seven reasons for Fall Spraying and each reason is sane and sound. Mr. Pratt's arguments are backed up by the opinion of several successful orchardists and nurserymen, also the Bulletins issued by the Experiment Stations of several States.

One or more of these booklets will be promptly mailed upon request to the B. G. Pratt Co.

A "PEACH PROFESSOR" IN PENNSYLVANIA

Prof. R. S. Mackintosh, for several years professor of horticulture and forestry at the Alabama Polytechnic Institute, Auburn, Ala. and State Horticulturist, has accepted a position at Pennsylvania State College as head of the department of Peach Culture. P. F. Williamis, assistant professor of horticulture, will succeed Professor Mackintosh, both in the chair of horticulture and as State horticulturist. J. C. C. Price, instructor in horticulture, becomes assistant professor. Professor Mackintosh is, to nurserymen and others of Alabama, one of the most familiar figures in the State. He has been prominent, since the organization of the Alabama Horticultural Association, in the workings of that organization.

100,000 Apple. 1 yr, 4 to 5 ft. and 5 to 6 ft., for Fall 1910. We grow the finest 1 yr apple in the world. Figure with us.

A. L. LUKE, Wynnewood, Okla.

Waxahachie Nursery Company

J. R. MAYHEW, Pres.

Growers of high grade Nursery Stock. Very large surplus for Fall 1910 and Spring 1911. Solicit a share of your patronage.

Waxahachie Nursery Company, WAXAHACHIE, TEXAS.

ROSES TO LINE OUT

200 Standard and New Sorts
in 2 1-2 and 4-inch Pots.

THE LEEDLE FLORAL COMPANY®
SPRINGFIELD·OHIO·

BUDS Apple, Cherry, Pear, Peach, Plum, etc., ready to ship July 1st. Our Growing Nursery Stock is very promising. Prices lower now than later. Big lot of Scions. Write for prices.

John A. Cannedy Nursery & Orchard Co.
Carrollton, Illinois.

1,000,000 1-yr. ASPARAGUS; 100,000 1-yr. RHUBARB PENNSYLVANIA NURSERY CO.

Girard, Erie Co., Pa.

**LARGE GENERAL STOCK ORNAMENTAL TREES,
SHRUBS, Roses, Barberry, Privets, Evergreens, Tree and Small Fruits.**
SPECIALTIES: Peach, Grape Roots, Currants, Gooseberries.

Shipper's Pride Red Raspberries

Plants For Sale. The variety of raspberries that pay; hardy, very prolific, vigorous grower, immense cropper; fruit bright red and large, exquisite flavor; ideal shipper. Book your orders now for Fall shipment.

A. W. RICHARDSON, Howard Lake, Minn.

BEVERLY NURSERY COMPANY

W. T. MITCHELL & SON, PROPRIETORS

Growers of High Grade Nursery Stock.

We have to offer for Fall, 1910, and Spring, 1911, 100,000 fine Two Year Apple Trees, and 30,000 choice Three Year old Apple Trees; also, 90,000 Peach Trees. Standard Varieties. Prices reasonable. We solicit a share of your trade. Address,

BEVERLY, - - OHIO.

Amoor River Privet by the thousand or car-load. Also have in quantity California Privet, all sizes, Shade Trees, Silver, Sugar and Norway Maples, Sycamore and Carolina Poplars, Grape Vines, Cannas, Peonies, Etc. Prices right. Prompt and satisfactory services. Let us quote you on your wants before placing your order. It will pay you.

Valdesian Nurseries, Bostic Department
BOSTIC, NORTH CAROLINA

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

JAS. H. BOWDITCH

903 Tremont Bld., - - - Boston, Mass.

Catalogues Received

Osterman & Sons, 29 Broadway, New York. Wholesale catalogue of forest and ornamental trees, deciduous and evergreen. A very neat appearing book.

H. den Ouden & Son, The Old Farm Nursery, Boskoop, Holland. Wholesale catalogue and price list of nursery stock.

M. Herb, Naples, Italy. General catalogue of bulbs and seeds for fall sowing.

Edmond Van Coppenol, Gand, Belgium, price list.

Clovena Nurseries, Richmond Borough, N. Y. Special price list of pansy and other seasonable seeds.

W. C. Slocock, Woking, England. Preliminary Wholesale list.

WHOLESALE

Bryan's Flower and Truck Farm, Alonzo J. Bryan, Proprietor, 282 E. Washington Ave., Washington, N. J. Wholesale price list of bargains in Pot Grown Plants ready for market at once.

Chase Nursery Company. Bulletin of 1910, Boxed Lots of Stock in cold storage at St. Louis, Mo., and at Rochester, N. Y.

Mount Arbor Nurseries, E. S. Welch, Proprietor, Shenandoah, Iowa. Wholesale price list of leading varieties of stock.

RETAIL

Harlan P. Kelsey, 285 Essex St., Salem Mass. Offer of Specimen Stock at Salem Branch Nursery for shipment. Also descriptive folder of the new Carolina mountain plant *Stenanthium Robustum* (Mountain Feather Fleece.)

B. W. Stone & Co., Thomasville, Ga. Illustrated folder on "How to Grow a Paper Shell Pecan Grove," with price list of pecan trees, apples, grapes, peaches, pears, mulberries, Japan plums and figs.

FOREIGN

Mansell & Hatcher, Ltd., Rawdon, Yorkshire, England. Catalogue of Lilies and Orchids, containing natural size colored illustrations of *Lilium sulphureum* and *Lilium Nepalense*.

Yokohama Nursery Co., Ltd., 21-35, Nakamura, Yokohama, Japan. 1910-11 descriptive catalogue of flowering and ornamental trees, shrubs, bulbs, herbs, climbers, fruit trees, etc. This catalogue gives the time of shipment from Japan, freight rates from Yokohama, etc. It is illustrated throughout, and contains several handsomely colored plates, one showing various designs of porcelain flower pots of delicate and artistic coloring.

SUPPLIES, ETC.

Anchor Post Iron Works, 165 Broadway, New York City. Catalogue of Iron Railings, Wire Fences, Entrance Gates, Special Enclosures for Poultry, Dogs, Cattle, Sheep and Game, Unclimbable Fences for Reservoirs, Cemeteries and Public Institutions, Iron and Wire Arbors, Trellises, Garden Appliances, Tree Guards, etc.

The Coe-Mortimer Co., New York City. Pamphlet discussing the value of Thomas Phosphate Powder (Basic Slag Phosphate) as a source of available plant food.

The H. L. Frost & Bartlett Co., 315 Atlantic St., Stamford, Conn. Tree Specialists, Landscape Foresters and Entomologists. Calendar for 1910, giving some of the most important spraying formulas.

Manhattan Oil Company, 51 Front St., New York. Folder on "One For All" lime-sulphur-arsenic Spraying Compound, insecticide and fungicide for all vegetation, trees, potato plants, melon vines, etc. Also folder on Manhattan Animal Dip and Spraying Compound, and Manhattan Oil Dip and Spray (for trees and vegetation where poison is not desired).

Thomas Meehan & Sons, Inc., Nurserymen and Tree Seedsmen, Germantown, Pa. Spring price list of Tree, Shrub and Fruit Seeds.

Thomsen Chemical Co., Baltimore, Md. Folder on "Orchard Brand" Lime-Sulphur Solution and Arsenate of Lead to be used as a Fungicide as a substitute for Bordeaux mixture.

THE ELLISVILLE NURSERY offers a full line of Nursery Stock, both wholesale and retail. Apple and Peach of the leading varieties. **Chesterfield P. O., St. Louis County, Mo.** **ANTHONY WILMAS, Proprietor.**

80,000 PEACH TREES For Fall Delivery

Also full line of nursery stock, including Red Oak, Berberis, Thunbergi, White, Austrian and Scotch Pine, Norway Spruce, Grapes, Currants, etc.

M. T. TWOMEY, - Franklin, Mass.

MAZZARD CHERRY SEED

We have a few bushels of Mazzard Cherry Seed, crop 1910, remaining and as it is only a small lot we are anxious to close it out and will make the price right. If you are interested, write at once. The seed is first class.

THOMAS MEEHAN & SONS, Wholesale Seedsmen
Dresher, Montg. Co., Pa.

FOR SALE

2,500 Elberta Peach, one year, 4-6 feet.
1,000 Cherry, two year, 4-5 feet. Richmond, Montmorency, Wragg.
500 Soft Maple. 250 Carolina Poplar, 6-8 feet.
200 Paeonies, Stools, red, pink, white.
3,000 Rhubarb Sets, Lennaeus, Strong Eyes.
5,000 Snyder Blackberry Plants.
50,000 Warfield Dunlap and Pride of Michigan Strawberry.
100 Shrubs, assorted.

All Trees and Plants have to be removed from the ground they occupy by November 15, 1910. Can ship Rhubarb, Paeonies and Strawberry plants, in 24 hours notice. **FIRST COME, FIRST SERVED.**

C. H. WEBSTER, Centralia, Illinois
WRITE ME FOR LOW CASH PRICE.



FRITSCH & BECKER
Seedmerchants
GROSS-TABARZ GERMANY.
SPECIALISTS IN
Forest Tree Seeds & Fruit Tree Seeds.
Offers on application.

Large Stock of

ELM SEEDLINGS

in all grades

CAN MAKE LOW PRICES NOW

Write us

PLUMFIELD NURSERIES

G. L. WELCH & CO., Proprietors
Fremont, Nebraska

BERRY PLANTS Root Cuttings and Peach Trees at half price. All varieties—both new and old—No. 1 Stock at unheard of prices. If short on the above let us fill out your orders. Ask for our wholesale catalogue. **English Beagle Hounds for sale, cheap. GRAY'S NURSERY, Pekin, Ind. (Dept. 13).**

ORNAMENTAL STOCKS

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420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for WHOLESALE
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BARBIER *and* CO., Successors,

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LOUIS LEROY'S NURSERIES CO., - - - ANGERS, FRANCE

L. Levavasseur & L. Courant, Directors

ESTABLISHED 1795

FRUIT TREE SEEDLINGS AND ORNAMENTALS

Exports exceed 25,000,000 Stocks annually. Wholesale Growers and Exporters of Pear, Apple, Mahaleb, Mazzard, Myrobolan, and Angers Quince Stocks. Forest Trees (seedlings and transplanted), Evergreens, Ornamental Shrubs, Manetti, Multiflore and Roses. Also a full line of Ornamental Stocks.

Our Wholesale Catalogue giving prices of above items, will be sent free on application.

H. FRANK DARROW, Sole American Agent, - - - NEW YORK CITY
26 Barclay Street. P. O. Box 1250

5 YEARS' use has proven that **SAN JOSE SCALE**
and all FUNGOUS diseases, controllable during the dormant season, are absolutely controlled by the use of

“SCALECIDE”

There is but one—“PRATT'S” Trade Mark, Reg. U. S. Pat. Off.

Prices: In barrels and half-barrels, 50c per gallon; 10 gal. cans, \$6.00; 5 gal. cans, \$3.25; 1 gal. cans, \$1.00. If you want cheap oils, our “CARBOLEINE” at 30c per gallon is the equal of ANYTHING ELSE. Send for our free booklet, “The Whys and Wherefores of Fall Spraying.”

B. G. Pratt Company, 50 Church St., New York City.

Manufacturing Chemists

ENGLISH NURSERY STOCK

EXTENSIVE STOCK OF CONIFERS, including a quantity of well-shaped specimens for decorative purposes. Low prices can be quoted on all Conifers. **HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES. ROSES**, Standards, Dwarfs and others. **MANETTI** and other **ROSE STOCKS. FRUIT TREES** in large quantities. Transplanted **FRUIT TREE STOCKS. RHODODENDRONS** and other **AMERICAN PLANTS**. (A good stock of all hardy varieties of Rhododendrons). **CLEMATIS** and other **HARDY CLIMBING PLANTS**. Transplanted **FOREST TREES**. The stock is in excellent condition this season. **FIRST GRADE STOCK ONLY SUPPLIED.** 30 years' successful trading in the States. No Agents. Write direct for wholesale catalogue.

Walter Charles Sloccock

Half-hour's rail from London by L. & S. W. Ry.
Main Southampton Line;

GOLDSWORTH NURSERY, Woking, Surrey, Eng.

F. J. GROOTENDORST & SONS,

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5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

Also general line of other stock. Personal inspection invited.

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**Japan Plum Carolina Poplar
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Poplars, Carolina, 2-yr., nice smooth trees, 6 to 8 ft., 8 to 10 ft., 10 to 12 ft.

Horse Chestnut, 4 to 5 ft., 5 to 6 ft.

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Plum and Cherry, 1-yr., 5/8 in. up, extra nice, well branched.

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California Privet, 12 to 18 in., 18 to 24 in. and 2 to 3 ft.

Berberberry Thunbergii, 12 to 18 in., 18 to 24 in.

Also good assortment of shrubs. Send for complete price list now ready.

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CLEMATIS PANICULATA Fine 3 year
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PLUM, CHERRY, QUINCE and STANDARD and DWARF PEARS
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Position as Foreman by man with 20 years' experience in nursery business. Well up on the most modern methods of Budding, Grafting, Top Working and Cultivation. Also Propagation of Ornamental and Herbaceous Stock. Good abilities for handling men. Best of references furnished.

Address "Herbaceous," care National Nurseryman.

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For full particulars address, Nursery,

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Established 1859

We are offering Peach Seed, crop 1910—natural and other kinds—as low as the lowest. Let us know your wants and send for prices, samples and testimonials. We make a specialty of **Va. Natural Peach Seed.**

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Assistant foreman in a large nursery in western New York. Must be experienced and able to handle men. State age, salary, experience and references.

C. B. C., care of this paper.

WANTED A competent, practical propagator, with ability to handle men. Experienced man with good testimonials. Chance to buy stock in Company if proven capable and worthy. Address:

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Two young men with knowledge of ornamental nursery stock. Furnish references. Steady place for right parties. **Vaughan's Seed Store, Chicago, Ill.**

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A large nursery company wishes a thoroughly competent outside foreman. Must be experienced in handling men, and growing Southern stock. Address giving experience, references and salary expected.

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Office man to take charge of Order Department and do other general office work. Single man who can use typewriter preferred. Give references, state experience and age.

Glen Saint Mary Nurseries Co., Glen Saint Mary, Fla.

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Energetic young man as superintendent of a pecan orchard to be located at Jeanerette, Louisiana, must be experienced in nursery work, used to handling men, free from bad habits, perfectly reliable. State experience, give references, state wages wanted. Good opportunity.

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5000 One Year GIANT HIMALAYA BERRY PLANTS

\$50.00 per 100. \$450.00 per 1000.

25 at 100 rates. 250 at 1000 rates.

It blooms here in Michigan end of June, making it a frost proof berry. Main crop September.

Our 10,000 Stock Plants have made a growth of from 20 to 30 feet this season, the berries have branches of fruit from 50 to 75 berries, the best berry ever introduced. Not a California berry, as some think, but from the north slope of the Himalaya mountains. Come and see them grow.

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Gardens**

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STOCK WANTED

500 Horsechestnut, good specimens
3 inch or 3 to 4 inch Caliper

1000 Platanus Occidentalis, good specimens
2 1-2 to 3 inch Caliper and up

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Also specimens ranging from 2 1-2 inch to 4 inch Caliper per 100 of Norway Maple, American Elm, Whitt Ash, Pin Oak, Red Oak, Scarlet Oak, Oriental Plane, Ailanthus, Gingko, European Ash, Lindens, Red Maple and other good large trees in quantity.

Send special offers on the above, and of any other first grade ornamentals on which you can quote special prices. Also your Trade List, soon as issued.

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PEACH SEED, Crop 1909

\$1.00 per Bu , F. O. B. Painesville, O.

SAMPLES ON APPLICATION.

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We have a large lot of trees on land that must be cleared this fall and winter. This stock consists of Peach, Apple, Pear, Plum, Cherry, Figs, Grapevines, English and Black Walnut, Pecans, Chestnut, Magnolia, Carolina Poplar, Oriental Plane, Linden, Box Elder, Umbrella China, Sugar and Norway Maple, Amoor River Privet, Lilac, Cape Jasmine, Roses, Arborvitaes, Spruce, Scotch and White Pines, Small Fruit Plants. All this stock is first class in every respect and our prices are right. Address

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Straight, clean stems, 8 to 10 feet and 7 to 8 feet, also **Schwedler's** and **Reitenbach Maples**, same grades. No better trees can be grown. Orders for car load lots solicited.

10,000 Laurel Leaf Willows, bush form, 4 to 8 feet.

10,000 Spirea Van Houtti, 3 feet, bushy plants.

Send for full list.

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Offers for the Fall of 1910 and Spring of 1911 a general assortment of choice nursery stock including fruit trees, small fruits, ornamental trees and shrubs, roses, evergreens, forest seedlings and apple seedlings. . . .

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looking for stock can find largest assortment in the
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Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
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Have full list of varieties for fall trade with special inducements for orders for late fall
delivery in car lots, or cellared for Spring if desired. Our facilities are unsur-
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Not satisfied with our present large cellars, are now build-
ing one 112 ft. by 240 ft. connecting with and south
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OUR SPECIALTIES ARE

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PEACHES

PEARS

PLUMS

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The Greatest Rose Novelty of the Century

It flowered with us this season and
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1910-For Fall & Spring-1911

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APPLE QUINCE PEAR CHERRY
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A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

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Special Attention given to Dealers, complete lists
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GENEVA, N. Y.

63 Years

700 Acres

Berckman's Southern Grown Plants Bring Profit to You and Satisfaction to Your Trade

It's a big satisfaction to supply your trade with such uncommonly **good** stock as the following quartette of varieties represents. It's a mighty **substantial** satisfaction, too, because **it really helps you build more business.**

These plants, when grown in Northern nurseries, cannot approach the magnificent growth they make when propagated in the South. Write and ask us about this, and the other stock we grow for Northern trade.

WE CAN SUPPLY THE FOLLOWING IN CARLOAD LOTS:



BIOTA AUREA NANA (Berckman's Golden Arborvitae) The best of the Biotas, Dwarf, compact; attractive "golden" foliage. 40,000 plants in various sizes.

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We'll gladly send our trade list and descriptive catalogue on request, telling all about these and other plants. It will pay you to push-Berckmans' stock with your trade this season!

P. J. BERCKMANS' CO. Inc., Fruitland Nurseries

Established
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Over 450 Acres
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The Farmers Nursery Company

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OFFER

APPLE, assorted, heavy in light grades
PEAR, Standard, assorted, extra fine lot of Kieffer
CHERRY, 2 year, the finest stock we have ever grown
PLUM, Japan and English, good assortment of varieties
PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.
NORWAY SPRUCE, 2 to 8 ft.
ARBOR VITAE, 2 to 4 ft.
BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
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Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

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Where the Choicest of Ornamental Trees and Shrubs are grown.

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In all sizes from young whips to large trees

EVERGREENS

in all varieties and sizes, such as

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Schwedler Maples	Red and White Flowering Horse-chestnut
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Oriental Planes	Paul's Scarlet Hawthorn and others
Roses, Rhododendrons, Box, Azalias	Pendulous Trees, Shrubs, Etc.

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or for the states of Cal., Ore., and Wash., to
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Offer 250 acres of Hardy Outdoor Nursery Stock in great variety, chief among which may be noted the following:

Hardy Named Rhododendrons in such varieties as Everestianum, Caractacus, H. W. Sargent, C. S. Sargent, Kettle-drum, Chas. Dickens, Lady Armstrong, Atrosanguineum, Chas. Bagley, Alba elegans and grandiflora, Giganteum, Old Port, Fastuosum fl. plena, Roseum elegans, Delicatissima, Ed. S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the Parson's Hybrids.

Andromeda Florib: transplanted 3-4 consecutive springs, bushy, well rooted plants, 6-18 inches. 20,000 to offer.

Andromeda Japonica, extra bushy, 9-24 inches.

AZALEA MOLLIS, extra bushy, well budded stock, 9-24."

AZALEA GHENT, hardy sorts, own root and grafted, extra bushy, 6-24 inches.

AZALEA PONTICA, sweet scented yellow, strong and bushy, 12-36 inches.

RHODODENDRON PRAECOX, transplanted, extra bushy, 6-18 inches.

BOX HANDSWORTH and common TREE BOX, 6" to 5 ft.

ABIES ORIENTALIS, PARRYANA, KOSTERIANA.
JUNIPERUS ALBA VARIEGATA.

PINUS CEMBRA, transplanted Spring 1910, strong, bushy, 12-30 inches.

RETINOSPORAS filifera, pisifera, pisif-aurea, plumosa, plum-aurea, obtusa compacta. TAXUS FASTIGIATA

AUREA. THUJA OCCID-LUTEA.

BEACH PURPLE, 3-9 ft. Seedlings, extra fine.

LIMES, Argentea, Dasystila, 5-8 ft.

OAK, scarlet American, 6-9 ft. NUT, purple, 2-5 ft. extra bushy. LILACS on their own roots. VIBURNUM PLICATUM, 3-6 ft. extra bushy.

ROSES! ROSES! ROSES! in best field grown budded stock, well-rooted, true to name, Hybrid Perpetuals, Hybrid Teas, Moss, Polyanthas, Climbers, etc., in Standards, Half Standards and Dwarf, in all leading sorts.

ALL FOR DELIVERY SEASON 1910-1911; new preliminary list now ready. When in Europe, you are invited to visit our Nurseries, one hour's ride from London. Send your orders timely through our Sole Agents for U. S. A. and Canada.

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31 Barclay Street, or P. O. Box 752, NEW YORK

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



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Wholesale Nurseries

Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Fall of 1910 and Spring of 1911 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmoreney, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

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Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Horseshoe Brand

Bamboo Canes

Nurserymen who want a first class grade of Bamboo Canes will find the Horseshoe Brand the best to buy. Quotations on all sizes upon application. Orders should be placed six months in advance for quantities of long poles for staking trees, etc., in order to obtain proper deliveries.

Don't delay--write now.

Ralph M. Ward & Co.

12 WEST BROADWAY, NEW YORK

Did You Receive a Copy of Our Catalogue for Fall 1910?

Our catalogues were mailed some time ago and if you have not received a copy by this time write us and we will send you one by return mail.

You should have a copy of this list because there is Ornamental Nursery Stock, such as HARDY TREES, SHRUBS, EVERGREENS, VINES, ETC., offered therein that you want. Stock of A No. 1 quality and at a price that is low for the quality. It also offers you a vast assortment to select from. It will be to your advantage to let us have an opportunity to quote upon your wants.

We also have a few MYROBOLAN PLUM, MAHALEB CHERRY, QUINCE and FRENCH PEAR STOCKS remaining upon which we will make a special offer to close out. If interested write us.

THOMAS MEEHAN & SONS

Wholesale Nurserymen

DRESHER, MONTG. CO., PENNSYLVANIA

B. & A. SPECIALTIES.

BLUE SPRUCE, all sizes, 2 to 7 feet.

WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.

ROSES, Hybrid Perpetual and Hybrid Tea varieties.

CONIFERS and EVERGREENS, 150 varieties.

RHODODENDRONS, Hardy Hybrid and Maxima, 50 varieties.

EVERGREEN SHRUBS, 35 varieties.

FLOWERING SHRUBS, 350 varieties.

JAPANESE MAPLES, 25 varieties.

ORNAMENTAL DECIDUOUS SHADE TREES, 50 varieties.

WEeping and STANDARD DECIDUOUS TREES, 50 varieties.

HEDGE PLANTS, 25 kinds.

HARDY VINES and CLIMBERS, 75 varieties.

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SPRING and SUMMER FLOWERING ROOTS and BULBS, 250 varieties.

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TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries Pears, Apples, etc.

SMALL FRUITS, 75 varieties.

NEW and RARE TREES, SHRUBS and EVERGREENS, 35 varieties.

MISCELLANEOUS NEW and RARE PLANTS and VINES, 25 varieties.

HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.

NEW and RARE CHOICE HARDY PERENNIALS, 65 varieties.

ORNAMENTAL GRASSES, 30 varieties.

HARDY FERNS, 50 varieties.

ASK FOR WHOLESALE CATALOG

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BOBBINK & ATKINS,

NURSERYMEN AND FLORISTS,

RUTHERFORD, N. J.

CHERRY OFFER

WE offer the trade, in car lots f. o. b. Huntsville, Ala., 75,000 2-yr. cherry, Alabama grown, made up of the following varieties:

Black Tartarian	Dyehouse
Montmorencies	Napoleon
Early Richmond	Suda
Ger. Ostheimer	Windsor
Governor Wood	Wragg

also extra fine 1-yr. and 2-yr. cherry Louisiana and Dansville grown. Special price on car-lots.

Quotations will be promptly submitted on application. Quick action is suggested.

Stark Bro's Nurseries & Orchards Co.

General Nurserymen

Louisiana, Missouri U. S. A.

We offer for

Fall and Spring, 1910-11

A LARGE STOCK OF

Hamamelis Virginica	Hornbeam
Silver Poplar	Black Locust
Tulip Poplars	American Persimmon
Carolina Poplars	Box Elder
Sweet Gum	Viburnum Prunifolium
Ozier Dogwood	Japan Walnuts
Catalpas	Balm of Gilead
Black and White Walnuts	Laurus Benzoin

(SHRUBS)

500 M California Privet	Weigelia
Calycanthus	Kudzu Vine
Deutzias	Ampelopsis Quinquefolia
Spireas	Honeysuckle Upright White
Wistaria, all kinds.	

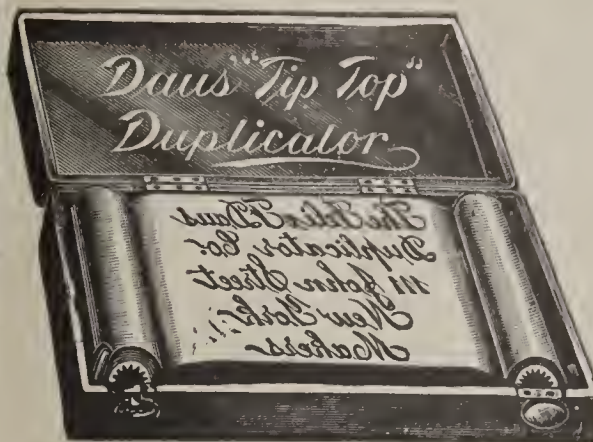
We offer a good assortment of Shrubs and a nice Collection of Ornamentals

Send for Trade Price List. Address

Forest Nursery & Seed Co.

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Rawhide Brand of Shipping Tags and Tree Labels

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This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

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WEST CHESTER, PENNSYLVANIA



MEMBERS OF SOUTHERN NURSEYMEN'S ASSOCIATION AT THE PETERS NURSERY, BEARDEN, TENN.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

National Nurseryman Publishing Co., Incorporated.

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ROCHESTER, N. Y., OCTOBER, 1910

No. 10

EDITORIAL WANDERINGS

Midland Colorado and the Famous Grand Valley Fruit Section

Perhaps no more striking example of the absolute dependence of fruit growing, on the western slope of the Rockies, and the inter-mountain region upon water conditions can be seen anywhere in that region to greater advantage than in the Valley of the Grand River, Colorado. At the time of my last visit to this region, in 1889, mining and cattle ranching were the only industries developing the country. After a lapse of a little more than twenty years the traveler may

rest his eyes upon miles of luxuriant orchards adjacent to the railroads; he may see well appointed packing houses where fruit is graded, packed and shipped under association brand;—and he may see the reason for all this remarkable transformation of desertlike areas of sand and sage brush into green stretches of alfalfa or productive orchards of apples, peaches, pears and plums. He would see the explanation of it all in the great conduits tapping the river and carrying the life-giving water across gulch and cañon to the mesas where the tiny streams distribute energy and health to the crops of the farm and orchard.

The elevation of the fruit growing area of Grand Valley is somewhat lower than the city of Denver, varying from approximately 5000 feet at the east end to 4400 feet at the western extremity. Fruit growing is indulged in for a stretch of thirty miles or more, though twenty miles in length will cover the more concentrated portion. The width of the Valley is absolutely fixed at one or two points

by the rocky walls of the cañon approaching the water's edge, but in other places, as at Grand Junction, the boundaries recede till the valley or water plane presents a width

of five or six miles—though not by any means even approximately level.

PHASES OF THE INDUSTRY

Nearly all the hardy deciduous fruits are grown, but the peach and the apple dominate. The former finds its greatest development in the vicinity of Palisade where



An Electric Frost Alarm used by Fruit Growers in the Grand Valley of Colorado

the Colorado Midland Railroad runs continuously through peach orchards for several miles. The Grand Junction country is the home of the apple and pear industry. Incidentally it is also the home of John F. Spencer, the exploiter of the so-called Spencer seedless apple—one of the most worthless apple introductions of recent times. It is probable that lack of wide experience with qualities and varieties of fruits prevented Mr. Spencer from acquiring a true estimate of the quality and value of the variety. Then again, it is undoubtedly true that the commercial interests which exploited it were more concerned in making money than in giving to the public a valuable fruit. I could not learn that it had any local standing or was regarded in any other light than that of a curiosity in the Grand Valley country.

VARIETIES

Of peaches, Elberta is the standard, the most popular and the most profitable. The season is opened with

Champion, Carmen and Belle, or other kinds of their period, and practically closed with Elberta.

Of apples, Jonathan leads all others in popularity. It is followed in order of importance by Winesap, Grimes, Gano, Rome Beauty and Arkansas Black. These growers aim to produce a product of great uniformity and beauty. The bright sunshine and cool nights develop handsome color tints and good keeping quality. The Colorado apple is sold on its appearance.

ORCHARD MANAGEMENT

In the early plantings the trees stand much too close. Some of these fifteen year old apple trees are not more than a rod apart and already the faint-hearted have begun to prune or trim up each tree instead of thinning by cutting out about half of the trees in order that the remainder might develop normally. The more experienced realize the situation, and where peach trees have been used as fillers these are coming out, but in cases where the orchards are of apples throughout, the reformation is taking place much too slowly for the good of the permanent trees. Later plantings are being set at thirty feet apart for the permanent trees, but it is a question whether this is adequate. Certainly not if the trees live as long under irrigation as they do under natural conditions in New England and New York. Both Mr. J. F. Moore, president, and H. G. Fletcher, secretary of the Grand Junction Fruit Growers' Association, are keenly alive to the importance of this question as affecting the quality of the product and are urging growers to set trees farther apart and to thin without delay orchards now beginning to crowd.

PRUNING

Peaches are uniformly vase-shaped and headed back in many cases to a flat top. The system is a transplant of that in vogue in Michigan a number of years ago, but very much modified in recent years. The trees are headed low but on account of close planting the heads are creeping up.

Apple trees are also headed low, but usually carry too many scaffold or framework branches. Signs of these heads now rising rapidly are not wanting in the older orchards for the side branches are shaded to the disadvantage of well colored fruit.

Reforms are bound to come. The pioneers, paradoxically as it may sound, often make the mistakes while reaping the rewards. Of course close tops are needed in that region of hot sunshine, but it may be overdone by growing seven or eight scaffold branches when four or five will serve the purpose better.

TILLAGE

Thus far the orchards are either tilled clean throughout the season, or a secondary crop, such as potatoes or sugar beets, is grown. Cover cropping has not taken hold as a practice. With such fertile soil as Grand Valley possesses and abundance of water, cover cropping is not likely to appear as a pressing question until it is forced upon the attention of the grower by economic considerations or possibly physiological disorders affecting the trees. At present tillage is directed, as in most irrigated sections, mainly to the conservation of soil moisture.

IRRIGATION

With an abundant supply to draw upon, water is freely used. The past spring has been unusually dry and on every side rivulets of water were slaking the thirsty soil. So liberal is the application that "navigation" even on foot through the orchards at this time is a trifle precarious. I could not help thinking that too much water was being

given in some instances. Of course this hinges finally upon the character of the soil. If natural drainage is good it follows that water may be applied with an amount of abandon quite dangerous to the health of the trees where the subsoil is retentive. It is a fact, however, that there is a tendency in irrigated sections to rely too completely upon irrigation and not enough upon conserving the moisture by



Intensive Cropping Means Copious Watering

frequent surface tillage. The Grand Junction region is soon to receive another large addition to its cultivable area by the opening of an extensive irrigating ditch upon an elevated mesa.

ENEMIES

Undoubtedly the most serious enemy is the belated spring frost, which has in the past on occasion reduced or wiped out the crop. Unquestionably, however, the topography of the Valley, favoring air drainage as it does, in many places palliates this natural difficulty very materially. On the other hand in certain seasons, that just experienced for instance, the cold factor decides the question of crop or no crop when no extraordinary means are taken to prevent it.

SMUDGING

Most growers credit what crop they have in the Grand Junction section this year to the good offices of the smudge or fire pot. One grower used 22,000 gallons of oil on his twenty-five-acre apple and pear orchard and felt thoroughly satisfied with the result. His trees were carrying a moderate crop of apples and pears, though the latter bore frost marks. The Hamilton oil heater seems to be popular

at the Grand Junction end of the valley. Heaters were used during a two day cold wave in April and again for two nights near the middle of May. Ten percent is a heavy toil to pay for frost protection, but not to be considered when it means a crop or nothing. The best orchards have electric alarms attached to thermographs which warn the grower when the temperature falls to the danger point at night.

INSECTS AND FUNGI

The Grand Valley fruit grower has much to be thankful for, in that he enjoys practical immunity from the scab and spot types of fungus diseases. Pear blight has appeared here and there but growers are fighting it vigorously and it should be eradicated. San José scale is kept out, or promptly destroyed by the operation of stringent inspection laws. On the whole the Valley fruit grower is very favorably situated. He has one enemy, however, which seems to enjoy natural conditions and to take full advantage of them. This is the codling moth. The breeding season is a long one. It is not proved that the first brood enters by way of the calyx exclusively. I was told that eggs were deposited anywhere on the apple over a period of three weeks during the time the apple was growing rapidly so that complete protection was difficult, if not impossible. These men are good sprayers, however. They use the best materials and implements and put up a vigorous fight during the long period of the moth's activity. With lime sulphur and Bordeaux spray as a remote or only occasional necessity the fruit grower should remember his blessings and be devoutly thankful.

ORGANIZATION

Grand Junction fruit growers are organized. They put up a uniform pack. This pack is inspected at home and sold on its brand and reputation. No fruit is sold on consignment. These men have passed this stage. They are not at the mercy of the dealer or commissionman. Their product has standing and does not need to hunt for a buyer. The buyer comes to the Association. Perishable summer fruit is sometimes sold at auction, but the consignment plan is tabooed.

It should be stated that all the fruit growers of the valley are not members of the association. This condition is almost inevitable but rather to be deplored. Different points of view and varying interests are the separating factors.

SOUTHERN NURSERYMEN'S MEETING

The twelfth Annual convention of the Southern Nurserymen's Association at Knoxville, Tenn., late in August, was successful and interesting. The sessions were presided over by President R. C. Berckmans of Augusta. Among the speakers were W. T. Hood, Richmond, Va., O. J. Howard, Pomona, N. C., Chas. T. Smith, Concord, Ga., and W. A. Easterly, Cleveland, Tenn.

The Association was entertained by the Peters Nursery at Bearden, and the Country Club of Knoxville. The sessions were held in the State College of Agriculture.

The local papers give special mention as follows to prominent members of the Association in attendance:

"John C. Miller is a prominent figure in the meeting, at the head of Miller & Sons, Rome, Ga. His firm is one of the largest retail nursery houses in the south.

One of the younger and most successful nurserymen

present is O. Joe Howard, office manager of the J. Van Lindley nurseries of Pomona, N. C. He delivered an interesting address Thursday morning.

Possibly but one nurseryman in attendance is a politician, Attorney-General A. J. Fletcher, of Cleveland represents the Fletcher-Harrison nurseries of Cleveland and is one of the best informed men in the South on peaches.

Charles T. Smith is at the head of the Smith Nurseries of Concord, Ga., which possibly has one of the largest general nursery concerns in the south.

W. T. Hood of W. T. Hood Nursery Co., Richmond, Va.

There is possibly no better known nurseryman in the south or in the United States than R. C. Berckmans, of Augusta, Ga., president of the association. He is associated with the P. J. Berckmans Nursery company, of Augusta.

W. F. Heikes, of Huntsville, Ala., owner and manager of the Huntsville Wholesale Nursery Company, is another nurseryman present whose trade extends over the entire world, and principally Europe. He has just returned from a tour of Europe and the orient.

Another nurseryman from Huntsville is Robert Chase, president of the Chase Nursery Company of that place.

Representing the Winchester Nursery Company is Aubrey Frink, of Winchester. This concern is owned by Nathan W. Hale, A. I. Smith, H. N. Camp and J. L. Deaver, of this city, and bears the distinction of being the largest peach nursery in the world.

Bruce Howell represents the Howell Nursery, east of the city: Peters Gettys, the Peters Nursery, at Bearden; A. I. Smith the Knoxville Nursery Company."

See Frontispiece for newly-elected officers.



Raising the water to the orchard level, Grand Valley

TRANSPLANTED RASPBERRIES FOR THE RETAIL TRADE

Merits of Tips and Transplants. Transplants the Best

W. N. SCARFF, New Carlisle, Ohio

A transplanted raspberry is an ordinary tip or sucker plant grown one year in the nursery row. A sucker plant is one that comes up of its own accord during the months of May, June and July, from the parent hill of red and yellow varieties of raspberries. A tip plant is grown from black and purple varieties of raspberries by layering of the ends of the branches in earth naturally or artificially during the months of August and September.

So you see in either the case of the tip or sucker plant there is but a short time to grow the finished product, and the plant thus grown is necessarily small, and being of quick growth is of soft wood and immature, and must have the best of care else it will soon perish when exposed to the sun or wind.

TRANSPLANTS SUPERIOR

Now, I am not going to say to you that a transplanted raspberry will yield a fraction more fruit, that it will withstand at maturity a drought any better, or a single degree more of cold, nor is it a bit better

in any way than an ordinary tip or sucker plant so far as its value for productiveness is concerned. But there is one particular point in which the transplant is so far superior to the tip or sucker, that there is really no comparison between the two. And it is on this one point that I shall base my entire argument in favor of the transplants against the tip or the sucker.

You have all had experience in making delivery of tip plants, and you know that I speak the truth when I say that next to the strawberry the raspberry is the most unsatisfactory and most difficult plant to deliver that you have to deal with. Let me tell you why this is. You cannot begin to grow a tip plant before the canes from the parent hill have made growth enough that the ends will easily reach the ground, that they may be covered with earth, and this will occur during the months of August and September. The sucker plant starts growth a little earlier, but in either case there are only two or three months at longest for them to mature. For in October, and sometimes in latter part of September, you are clamouring for your raspberry plants; and these young, immature bunches of white roots must be dug in the hot, dry days of

early autumn, and with the best possible care that can be given them there is danger of their being more or less damaged in handling. After this they must be shipped to destination, and usually by freight, which requires ten days to two weeks longer.

They are finally put on your packing grounds, repacked in small quantities often times, and tied up with a bundle of trees, and then another long freight shipment occurs, finally reaching the hands of the planter in the latter part of October or early November. Now, is it reasonable to

believe or to expect a plant that was only 40 to 60 days in the making to withstand such treatment? When you come to consider the matter is it any wonder that you have trouble, or to put it in a little stronger language, can you imagine how it is possible for them to grow at all? I believe if the figures were at hand that I might tell you just how many of these early fall dug plants do actually grow that the fact would



Orchard scene near Grand Junction, Colorado. Irrigating canal above orchard areas on left

still be more astounding. For it is one of the most difficult plants to pack and have open up in good shape there is. If you pack in tight cases there is danger of heating; if in slatted crates they will dry out and be valueless; if the moss is too wet they will rot, and if too dry they shrivel to almost nothing. They cannot be dug and stored any length of time or they would mould and the canes die, and if left in the ground over winter they winter-kill.

TIP PLANTS TENDER

The tip and the sucker raspberry plants are all right in their place; and even if they are small and tender they have bound up in them every element and every quality necessary for the production of immense crops of fruit. Those tiny, often immature plants have stored in them exactly the same energy, the same elements, the same proportions, the same productiveness, vigor, vitality and strength as the transplant; but it is in an undeveloped state. You have the same conditions here as you have in the apple graft after it has once attached itself to the root. In the graft you have the true Baldwin or the Winesap

apple tree, but in the embryo stage; and this graft is to the three year old tree in exactly the same relation as the tip or sucker is to the transplant. They are in an undeveloped stage; they are incubator babies, and simply need careful attention for their development.

So after all is said and done, we have not depreciated the value of the tip or sucker plant. We believe that if the fruit grower has his own plants he is just as safe, even in the fall of the year, to plant this light grade stock as he would be to plant transplants. But, the point at issue with this body of nurserymen is this; can you afford to take the long chance in delivering anything but the best possible stock to your customers? And when you know that the odds are many times in favor of failure in using this light stock can you afford to take the chance? Had you not better pay the extra price and get something that will be a credit to you, and a plant that will give your customer full value for the money he has paid?

USE STRONG PLANTS

A well grown transplanted raspberry should be 18 to 24 inches high. Some varieties will be more or less branched, while others will be a single straight stem, depending largely on the nature of the variety. They will have a good root system, equal to the currant or gooseberry, and at this stage of growth will withstand as much exposure as other shrubs or plants of this nature.

Thus you have for your delivery a plant that will show up with the grape vine, currant or gooseberry bush: one that it is not necessary to roll up in paper to keep from losing, and likewise a plant that will withstand transplanting in the field just as well as any of the plants we have compared them to.

CUT BACK TRANSPLANTS

Let me add a word of precaution, or rather advice, at this point lest it be overlooked. Advise your customers to cut back these transplants after planting to six or eight inches of the ground, for as a rule the top growth is out of proportion to the root system; besides a raspberry cane is usually more or less damaged by the cold of winter; and if they are cut back and each hill mulched with a fork full of coarse litter it is safe to say that the loss will be very small indeed.

Another point in favor of the transplant is that it can be dug several weeks earlier in fall than it is possible to dig the tip plant. There is but little danger of damage in packing these plants as there is but slight tendency to heat if properly packed; while the tip requires the most careful attention in packing, and should have pure moss as a packing material especially for fall shipment.

There is a growing tendency throughout the entire country among nurserymen to deliver just as nice and fine stock as they can possibly get, and to give to each customer full value for every dollar they receive; and the transplant is not something new. Many of our leading nurserymen have been using it for years, and will consider no other grade for filling their orders.

AVOID CHEAP PLANTS

The day of cheap plants is practically over. Our people are being educated to pay a fair price for any commodity, providing they can get the quality they buy. They are beginning to discriminate against cheap stock. They realize that a few dollars saved in the purchase price of plants may mean the loss of hundreds of dollars at fruiting season. So the nurserymen realize that a pleased customer is a good thing to have, and he wants his stock on delivery day to compare with that of his fellow nurseryman, and when brought to the final test of making good to the grower in a financial way he wants to show a good record.

The raspberry is only one of a long list of nursery stock;

but what is true in this case is true all along the line. And when I point out to you the value and necessity of delivering the best raspberries you possibly can, you can apply it to every article that you sell. The day is past when nurserymen tie up just anything in rye, straw, moss and burlap, and exact a big price for it.



Peaches used as fillers in the apple orchard; now being removed
Inter-mountain region

Nor has there been a club held over their heads to compel them to do the fair thing; but good business instinct, keen competition, and desire to do the right thing has been the incentive and the cause for much improvement in the last ten years in our business.

The nurserymen of today take a pride in doing right, and the bundles of trees and plants they send out all over this land go out as advertisements of their respective establishments. When we see our stock loaded ready for shipment with the different tags billing them to all parts of the country, it stirs within us a feeling of just pride, as we think of each package being a bundle of value that will go to some person to give him profit and pleasure from the planting of it. When the time comes that the trees should bear and the flowers bloom he will have what he paid for, and his home and his life made brighter by our being nurserymen.

CHARGE REASONABLE PRICE FOR GOOD STOCK

A transplant cannot be grown for nothing, and you must not expect to get it cheap. Let us figure it out. You must first have the tip plant to start with, which costs money. This must be transplanted and grown one year, dug, graded and tied. If you get 75 per cent of these tips to grow you are doing well; more often you get 60 per cent. So there is no more profit in a transplant at \$15.00 than a tip at \$8.00.

But for fall delivery we believe that the difference in price is not too great to prevent the transplants being used. Of course, this will mean a revision of prices at which you must sell your raspberries; but the satisfaction of sending out this stock will, we believe, over-balance the advance price.

Now, I do not wish to be mis-quoted in this matter. I want you to understand that if you plant a tip or sucker plant early in spring when the ground is cool and moist, and if the plant has been carefully handled and given careful attention after starting to grow, you will have just as good results in every way as if you had used a transplant. But if your trade is of a character that exacts strong heavy stock, either in fall or spring, then the transplant is what you must have.

Then, too, a transplant can be kept quite dormant in the spring long after the tip plant has perished, and it can then

will be transplants. There will always be a place for the tip plant among large commercial growers, who understand caring for them; and it would be folly for them to use anything else, for they understand how to handle them, when to plant, and how to care for them, and their results will be good. But the retail trade exacting the large, showy stock, to be planted by a promiscuous lot of planters, who understand little about the nature of a plant; there is but one class that will answer, and the transplants fill that bill.

MR. WEBER ACKNOWLEDGES LOVING CUP

To the Members of the "Cup Committee" and the Eastern Nurserymen:

I hereby extend to you, one and all, my sincere and most grateful thanks for the beautiful "pitcher" presented to me by your committee.



Tapping the Grand River, near Grand Junction, Colorado

be planted with perfect safety; and so it again fills a place that cannot be filled with the other class of stock.

Now, do not think that you can get a transplant at a cheap price, and do not ask it, and if you buy tip plants and deliver them along with your competitor, who has bought and paid for transplants, do not try to discount your bill because your plants were not as good as his, nor as large or showy as you imagine they should have been. And in buying do not hammer down the price to the tip basis, and expect to get transplants. You must be willing to pay the price.

DEMAND FOR GOOD STOCK INCREASING

There is a growing demand for this class of stock, and it is only a question of time when all raspberry plants delivered in the fall of the year will be transplants. And many firms we believe will use no other grade at any time, owing to their size, appearance, and the general satisfaction they give. All raspberries planted very late in the spring

It will ever be cherished and I assure you that the token is highly appreciated.

Yours very truly,

Nursery, Mo.

F. A. WEBER.

Mr. Weber adds: "The reproductions of the loving cup and the pitcher are excellent as they appear in the NATIONAL NURSERYMAN. I am most grateful for this expression of appreciation on behalf of my friends in the East."

TEXAS NURSERYMEN'S ASSOCIATION

This active and progressive organization met at Waco during the middle of last month and held a highly satisfactory series of sessions. This association has held three meetings since July, 1909. President J. R. Mayhew of Waxahachie, Texas, occupied the chair on these occasions. A fuller report will be given next issue.

NURSERY CONDITIONS

While the growth of peach trees has been excellent in this locality, the quantity of peach stock is rather limited. Apples have made a fair growth; the supply is below the average. One-year-old apple buds, however, are doing exceptionally well, while the stand of apple grafts has been considerably below par. Growth of cherry buds and grape cuttings excellent. Dwarf pears and apples have made a light growth. Standard pear, of which Keiffer is a leading variety, has made a fair growth. From our view point, we are looking for a shortage on first class nursery stock, particularly in apple and pear. Our budding season began on June first and ran continuously until the first of September.

J. G. HARRISON & SONS,
Berlin, Md.

We have an especially large and fine stock of cherry which we do not think can be beat in the country.

Judging from the inquiries we have had for stock we believe that trade will be fully as good if not better than last year, which was the best we have ever experienced.

Monroe, Mich.

I. E. ILGENFRITZ' SONS CO.

RICHMOND, VA.

Editor NATIONAL NURSERYMAN.

We have made about ten per cent more sales to date this season than last, by agents and dealers—while our dealers sales have fallen off to about one half of last season on account of our increasing prices to dealers. We, however, made an effort to increase agents' sales, and in this we were



On the crest of the Rockies, 11,000 feet, as seen from the "Midland" Route

Editor NATIONAL NURSERYMAN.

Never in the history of our business has our stock looked as handsome and made such free, vigorous growth, as this year. This applies to all our material. We grow so many thousands of varieties of trees, etc., that it is impossible for us to outline stock that is long or short or special items of interest. We are trying our very best to make each item of equal interest. We shall be pleased to have any of our readers visit our nursery at whatever time is convenient, feeling confident that we have many beautiful plants, etc., that would interest them.

BOBBINK & ATKINS.

Editor NATIONAL NURSERYMAN.

Notwithstanding the unseasonable weather in May and early in June which retarded growth considerably, since warm weather set in our stock made up beautifully, and we expect to have a very complete stock to offer the coming season.

successful. We have been holding off agents from taking large apple orders, as we are sold very short on apples. We increased our retail prices on apples this season.

We have a very full line of fruit trees this season, except apple, which we are short of, owing to our planting of apple in 1909 not doing well. We will have quite a good surplus of peach, which have grown well. We think other nurseries besides ourselves were not successful with their 1909 apple planting, as we find from samples received, they have not done nearly as well as our own.

The season has not been as good a growing season as we have had on account of being both too early and dry in the beginning of the season and having too much rain during the growing season, though some things have done unusually well. We did not make a large planting, not much above our annual planting—our apple grafts made the best stand for some years, and have made good growth. Have had a very good season for budding and very little to rebud,

about through at this time, also about through with our pruning, and have boxes all made and tops and cleats cut out, and we hope when the time comes to ship out our stock we will be in shape to push out without much delay.

There is prospect for a good crop of apples in our state with fair prices for good fruit, and we find a good deal of inquiry for the leading varieties, York Imperial, Winesap, Grimes' Golden, Albemarle, Pippin, Bonum, Rome Beauty, and Stayman's Winesap.

In lists we have sent out to get prices on such stock as we have to buy, we find no uniformity in prices, except among the grape growers. In some things offered there is a difference of from two to four hundred per cent in prices, which looks very bad for us as nurserymen. We have also quoted stock, which we thought was about market price, and have had the parties say that we were away off.

With best wishes, I beg to remain,

W. T. Hood.

Correspondence

"PEDIGREED" PLANTS

Editor NATIONAL NURSERYMAN:

The English language is capable of expansion, fortunately, but until another word has been evolved to fit the case, I do not see that there should be any objection to using the term "pedigree" when describing a plant of absolutely fixed type, even if the parentage cannot be sworn to as extending over a period of successive generations. "Pedigree" means also "strain," and there is no limit to the term in the matter of antecedents: Who then shall say when a plant or an animal is entitled to be called pedigreed, if "known parentage" is all that is required?

But the analogy between plants and animals cannot be drawn to too fine a line of distinction; both are capable of improvement by breeding. Varieties sport; they also degenerate. Taking into consideration these two facts, it will be seen that strict and conscientious adherence to a fixed type will alone maintain a high standard in cultivated known varieties.

As an illustration, I am sending you a water color sketch of what I may term types of the "French" or "Petite d'Agen" prune, so largely grown in California. This variety was imported from France in the early history of California's horticulture. The fruits here reproduced were picked by me from trees in various orchards in one valley, all being known and propagated under one name. The variation in vigor and habit was just as strongly marked, as was also their prolificness. Whichever, then, of these fixed types answers to the authentic description of the variety known as "Petite d'Agen," is it not entitled to the term "pedigreed," as much so as the Polled Angus or Plymouth Rock which, answering to the description in every detail of its respective kind, is admitted for competition? It is "selected" because it is the *true type*. If it is the true type, and is propagated from exclusively, why is it not pedigreed, as a fixed type of a known "strain?" If the term is not

admissible, will some one offer a substitute, as to say "selected" would be absolutely meaningless? Every "pedigreed" animal must have a beginning, an original type which is referred to for identification.

Experimental work carried on by such men as Herbert J. Webber of the Department of Agriculture, necessitates accurate records of various series of hybrids, showing both male and female parentage. Only occasionally is a resulting plant admitted to be even worthy of further testing. Nature does a lot of this kind of work, and the expert horticulturist will find varieties of exceptional and distinctive merit. The "origin" of thousands of cultivated varieties of fruits is known and recorded. Dr. L. H. Bailey has called attention to the degeneration and variation of varieties, such as Crawford's Early. The question then arises, are trees raised from these originals or from their descendants, having all the marks of the original, "pedigreed" or "selected", or what are they? And what word will better explain the true meaning which, after all, is the object of words and language?

LEONARD COATES.

Morganhill, California.

Exhibitions and Societies

DRY FARMING CONGRESS, SPOKANE, OCT. 3-6

The Dry Farming Congress now in session in the progressive city of Spokane, Washington, will represent the most advanced thought and up-to-date ideas on irrigation and the management of land under deficient natural water supply that the world affords. Not only is the meeting one for conference, but it is also one for competition, prizes totaling an amount of \$10,000 are offered in various competitions. These are mainly for products grown by dry land farming methods. Representatives from the irrigated sections of Europe, South America, besides all dry land regions of the United States and Canada are present. This Congress is increasing its scope each year, and there is large opportunity for co-operative effort in the various departments which it touches.

WATSONVILLE ANNUAL APPLE ASSOCIATION

Watsonville, California, the home of the White Winter pearmain and fine Newton pippin apples, celebrates an ambitious apple show this month. Liberal prices are offered for an extensive assortment of apples variously displayed. This is good advertising.

NATIONAL APPLE SHOW, SPOKANE

As noted in previous issues of this journal, the National Apple Show of Spokane will be held November 14-19. The prizes in cash, trophies, orchard apparatus, and nursery stock aggregate a total value of \$25,000, and competitions include carload lots on one hand and single apples on the other.

CHICAGO APPLE SHOW

Following the Spokane Show there will be held in the First Regiment Armory, Chicago, from November 28 to December 4, a display of the prize winners and collections of fruit from the different and leading fruit growing districts of the Pacific Northwest. This show is for the special purpose of bringing to the people of the Middle West a better conception of the fruit growing possibilities of the Pacific Slope states.

OREGON FRUIT SHOW

The Oregon State Horticultural Society will hold its twenty-fifth annual fruit show at Portland, November 30 to December 2, 1910, in connection with its annual meeting. The competition includes prizes for 25 best boxes, 5 best boxes, 3 best boxes, 2 best boxes, and 1 best box, in addition to county and district prizes for apples, pears, grapes, dried fruits and canned fruits. The President of the Association is H. C. Atwell, and the Secretary, F. W. Power. The exhibition will be held in the store of Meier & Frank Company on Fifth Street.

BRUSSELS INTERNATIONAL SHOW

Reports of the first of the series of international horticultural shows held on the grounds of the Brussels (Belgium) Universal Exhibition which opened April 30th, state that the planning and laying out of the exhibits of plants and flowers have been done by a master hand, so artistic and scientific is the scheme of arrangement. The exhibit of fruits was very fine, most of the varieties coming from the colonies of Belgium. There was a large exhibit of citrus fruit from Africa, also pears, apples, pineapples, etc. The strawberries and raspberries were exceptionally good, and plants of strawberries in pots, in bloom and with good ripened fruit, were prominent. A splendid exhibit of fruit in a glass case contained strawberries, raspberries, cherries, plums, nectarines, peaches and a splendid assortment of foreign grapes. The orchid display was one of the largest exhibits ever made, and thousands of people viewed them daily with admiration. There were many decorated tables; the table taking the first premium—shown by a well-known Paris firm—was arranged with fine orchids entwined with asparagus plumosus.

A large piece of land near the building containing the floral display, laid off so as to be easily viewed and planted, contains blocks of evergreens, shrubbery, roses, both dwarf and standards, fruit and ornamental trees, fruit trees trimmed scientifically as espaliers, pyramids, etc., and fantastically trimmed trees of holly, box, yew and others. Along one of the avenues were rows of bay trees, very large, both pyramids and standards, with enormous tops.

THE 1911 MEETING

We learn that Secretary Hall is already considering matters in anticipation of the 1911 convention to be held in St. Louis. He has opened negotiations with the leading hotels and is looking for a suitable place for meeting and exhibits. We can count on Secretary Hall being thoroughly beforehand in such matters.

THE APPLE INDUSTRY IN ONTARIO

Prof. J. W. Crow, of the Ontario Agricultural College, Guelph, Ontario, in an address delivered before the Apple Shippers' Association in Niagara Falls recently, compared the present position of the apple industry in Ontario with that of fifteen years ago, and stated some of the causes for its decline.

The first reason given as a cause of the decline is the increase of fungous and insect pests. It is said that probably less than twenty years ago apple scab and codling worm were not found in abundance in any part of Ontario.

The second great reason is winter injury. On account of the comparatively mild winters up to six or seven years ago, many varieties which have since proved tender were planted, and these are now dying in all sections of the Province, owing to two extremely trying winters within the past few years.

The third reason is the unfortunately large number of buyers of the wrong kind, under whose influence prices have been lowered, until the farmers have lost interest in apple growing.

It is a significant fact that many buyers, unable to secure good apples, are going into the business of apple growing themselves. Co-operative selling is advocated, due to the fact that in almost every locality in Ontario where the apple business is thriving, there is to be found a growers' co-operative selling organization.

THE NORFOLK DISTRICT. The apple industry has shown more progress in the county of Norfolk than in any other section of Ontario in recent years. Mr. James E. Johnson, of Simcoe, as manager of the Norfolk County Fruit Growers' Association, is largely responsible for this condition of affairs for he has established a high standard for grading and packing. Last year, approximately 19,000 barrels of apples were packed by this Association. Both old and new orchards consist largely of Baldwin, Spy, and Greening. Most of the orchards in the county are now being given careful attention in the matter of cultivation and spraying, and winter injury is unusual, owing to the location in southern Ontario. Choice varieties of No. 1 fruit sold last year for \$3.50 a barrel f. o. b.

It is in the Lake Huron District that the decline of orcharding is most noticeable. Many excellent orchards in this region are receiving little or no care. A good business proposition is waiting for the enterprising man who will take hold of such properties as these.

GOOD ADVERTISING

Apple Tree Worth \$30,000. A telegram to the N. Y. *Herald* from Tacoma, Wash., announces that "An apple tree planted twenty years ago by an Indian, near the shore of Lake Chelan, is now worth \$30,000, that offer being made by an Eastern orchard syndicate that desires to propagate the variety. It was refused by the nursery company, which will itself develop the fruit. The tree produces a golden yellow apple called the 'Chelan' It is different from any other Washington apple, possessing exceptional keeping qualities."

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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F. A. Weber, Nursery, Mo.

EDITING REPORT—John Hall, Rochester, N. Y.; Prof. John Craig, Ithaca, N. Y.

ENTERTAINMENT—F. A. Weber, Nursery, Mo.

FORESTRY—A. J. Brown, Geneva, Nebr.

CO-OPERATION WITH FRUIT GROWERS AND ASSOCIATIONS—J. M. Irvine, St. Joseph, Mo.

TRADE OPPORTUNITIES—Jefferson Thomas, Harrisburg, Pa.

NURSERYMEN'S SHARE IN CIVIC IMPROVEMENT—J. Horace McFarland, Harrisburg, Pa.

ROOT-KNOT—E. A. Smith, Lake City, Minn.

MEMBERSHIP—John Watson, Newark, N. Y.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckman, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.

American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.

Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.

Connecticut Nurserymen's Association—President, C. W. Atwater, Collinsville, Conn. Secretary, John S. Barnes, Yalesville, Conn.

Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.

National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.

National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O. secretary, W. B. Cole, Painesville, O.

Pacific Coast Association of Nurserymen—President, C. Malmo, Seattle, Wash.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.

Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.

Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.

Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.

Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

TARIFF DIFFICULTIES

That there is considerable ambiguity in the interpretation of the new tariff in reference to nursery stock is being continually developed by the frequent protests against the decisions of the appraisers. A case in point has recently come to our attention, where Mr. Irving Rouse of Rochester, N. Y., in importing evergreen seedlings, was in his judgment charged duty under a wrong classification. He filed a protest, calling attention to what in his opinion was an error, but did not deem it necessary to appear in person before the appraisers in New York. The fact of his non-appearance seems to have been sufficient reason for disallowing the claim. In other words, his case was defaulted by reason of failure to appear or by a representative, but through no lack of evidence as to the apparent equity of the protest. This seems to be a peculiar form of passing upon the merits of a case. It would also appear to call for a clearer description of stock, in order to avoid misunderstandings of this nature.

METHODS OF ORCHARD HEATING

The principle that orchards may be saved from injurious frosts by the employment of artificial heat has been thoroughly established in the inter-mountain and coast fruit regions. As a natural result of this finding, the method of applying the heat has received considerable study. It now transpires that there is a sharp difference of opinion between the advocates of the coal heater on the one hand, and the oil heater on the other hand. It is a little difficult to get at the exact merits of the case, for in each instance, the opinions of the advocates are largely colored by personal interests. The oil men advocate the oil heater, not only because they think it is the best, but for the further cogent reason that their financial interests are involved; and what is true of the oil men is also true of the coal men. It would seem, therefore, that there is opportunity for some careful investigations having for their purpose the economic results. For instance, the Ideal Orchard Heater Company of Grand Junction is strong in its advocacy of the coal heaters, while the Grand Junction Valley Fruit Growers' Association is backing the oil heater. Undoubtedly the merits of the two methods will find vindication in the not distant future. In the meantime, the two sides are having all the fun arising out of an active and competitive controversy.

FRUIT GROWING IN THE CENTRAL WEST

Apple and peach growers of the Central West may be said to have experienced checkered careers during the past fifteen years. Part of the reverses which have overtaken this region are unquestionably charged to faulty methods, poor judgment in the matter of selection of varieties and orchard sites, as well as bad management in the packing and handling of the product. A letter from an enthusiastic believer in the fruit growing possibilities of the region indicates his strong belief in the arrival of a new era for that section, an era marked by the awakening of the fruit grower to the necessity of better spraying, better fertilizing, the necessity of using orchard

heaters, of more careful selection of varieties and more thoroughness in packing, handling, and the desirability of co-operation in the marketing of the product.

With examples of individual growers securing \$30,000 from a peach crop, and Elbertas bringing \$1.75 per carrier, and the knowledge gathered from experience that "brown rot" can be prevented by spraying, and that carefully selected orchard sites are relatively immune from late frosts, the peach and apple grower of the Ozarks of Missouri and Arkansas is attacking the problem of fruit culture with renewed vigor and enthusiasm. We are delighted to wish the good men, the strong men among the newcomers as well as the pioneers in this region every success; and success is sure to come in proportion to the application of intelligence, energy and good judgment.

BECHTEL'S DOUBLE- FLOWERED CRAB

For several years one of the handsomest small trees on the Cornell University campus has been this form of the Western or Middle State crab—*Pyrus Ioensis*. This type of native crab is a variation of the eastern *Pyrus Coronaria*—by some considered merely a variety, while by others regarded as being sufficiently distinct to give it specific rank. The writer is of the opinion that it should be regarded as a variety rather than a species.

The type is found growing in the Mississippi Valley, is a small, compact tree with a rough bark, which is laid on in longitudinal plates and which tends to scale off as the tree attains age. The blossoms are single, abundant and moderately fragrant. The special form which bears the name of Bechtel, the introducer, is as double as a rose, with blossoms, two inches or more in diameter, of a delicate pink tinge, deliciously but not heavily fragrant. The tree produces its annual crop of rose-like blossoms with great regularity. It blossoms a week or ten days before the King apple—a mid-season variety—and remains in blossom for a considerable period. This year the cold weather held the tree in suspense for a long time, and during this period when the buds were gradually unfolding it was an exceedingly attractive object. On account of its hardiness, its ease of propagation and its suitability from the point of stature to small lawns and park planting, this beautiful arborescent form should be much more extensively planted and more widely known than it is at the present. It may be multiplied by grafting or by budding on the ordinary apple stocks, but I expect that it will do better on Paradise or Doucin than American or French seedlings.

DWARF STOCKS

We are frequently asked what our preference is in reference to the kinds of dwarfing stock available to the commercial grower. In England and Europe while there are a number of types employed, Paradise and Doucin are more extensively used than any other. Again, in England much more consideration is given to the question of stocks and their influence on the tree than has yet come into vogue in this country; but we are bound to reach the same condition before many

years. It is usual in Europe to propagate trees for special purposes. When the smallest form of tree of a given variety of apple is required, the Paradise stock is used. This is a diminutive form and literally starves the scion. When such trees are planted in such manner as preclude the possibility of rooting from the scion, the stature remains very small. On the other hand, if planted deep, they are likely to emit roots from the scion portion, and will soon approximate their natural habit of growth.

The Doucin stock is considerably more vigorous and a larger growing tree than the Paradise, and to this extent influences the growth of the scion. When trees are grown after the so called pyramidal form and frequently when strong espaliers are required, Doucin may be employed. In this country, it seems to us that we are not yet ready for the refinements in the use of these various stocks, and when a person desires a dwarf, they want the extreme on the diminutive side. Therefore, the Paradise is the form which is likely to give the greatest satisfaction. There is a good deal to be learned in reference to the adaptations of stocks to soils and climatic conditions, and we believe that right here there is an excellent field for experiment station research.

PURE INSECTI- CIDES AND FUNGICIDES

Many nurserymen have been aware of the commendable efforts being made by chemists, fruit growers, and the best of the fungicide and insecticide manufacturing interests of the country, to secure the passage of a law to govern the manufacture of pure insecticides and fungicides.

More than two years effort has been placed upon this movement, and it is gratifying to report that the bill passed Congress last session and has since been approved by the President, and is now known as the "Insecticide Act of 1910." This bill goes into effect on the first of January, 1911, and regulates the standards of insecticides and fungicides in so far as interstate commerce is concerned. In this respect, it has the same status as the pure food law. In other words, all goods of this kind which are shipped from one state to another must conform to the standards required by the national law; but the law does not cover the manufacture and sale of insecticides within the state. To meet this contingent, some of the states are now contemplating further legislation. In certain cases, standards differing from the national standard are being erected. This is a serious mistake, and is certain to cause grave confusion. All nurserymen are asked to interest themselves in the formulation of such bills with a view to standardizing them in accordance with the national bill already in effect. Attention is called to this matter in another column of the NURSERYMAN by the executive committee which had charge of the insecticide and fungicide bill. The good work of this committee should not be vitiated in any way by hasty and faulty state legislation.

The Publicity Committee on cherries is considering ways and means for the carrying on of an effective campaign.

Legislation

FOR UNIFORM LEGISLATION IN REGARD TO INSECTICIDES

As you have already been advised, the proposed Pure Insecticide and Fungicide bill which has been up before Congress for the past two years has passed and been approved by the President, and is now known as the "Insecticide Act of 1910." This measure goes into effect the first of January, 1911, regulating the standards of insecticides and fungicides in so far as Interstate Commerce is concerned.

A few of the States have legislation covering all insecticides and fungicides; several of the States have legislation covering only one or two insecticides, such as Paris Green.

Inasmuch as there is a national measure, there does not seem to be much call for any further State legislation, yet we learn that a few of the States are contemplating taking some such action. Therefore, we urge upon all supporters of the national measure to bend their best efforts, in case their State is contemplating any such legislation, to have said State adopt the national measure.

It is just as imperative in the case of this bill, as it was with the Pure Food and Drugs Act, that there will be uniform legislation throughout the country.

We also urge upon those living in States having some insecticide and fungicide control measure in force at the present time, to endeavor to have the present measure so amended as to conform with the National Act.

The Committee wishes to express its appreciation of the aid given by the state members of its advisory board, by the agricultural press, and others who interested themselves toward securing the passage of the bill.

Trusting that we may have the same hearty co-operation along the line outlined above as we did in promoting the passage of the National Bill, we remain

Yours very truly,

EXECUTIVE COMMITTEE,
E. D. SANDERSON, Chairman.

NEW YORK NURSERY SHIPPING LAWS

Albany, September 1, 1910.

To Nurserymen in the State of New York:

We are sending you by accompanying mail our Bulletin No. 20, relative to the inspection, certification and transportation of nursery stock. The law requires that—

1. No shipments shall be made unless accompanied by a copy of a valid certificate of inspection signed by the Commissioner of Agriculture.

2. No nursery stock shall be sold or shipped under a certificate unless the stock was raised in the nursery for or to which the certificate was issued, or until such stock has been duly inspected.

3. All nursery stock received from outside the state must be held unopened until authority is given to open by

the Commissioner of Agriculture or his agents. All such stock is subject to inspection.

4. Notice must be sent promptly of the receipt of all imported shipments.

Bulletin No. 20 gives a copy of the orders of the Commissioner of Agriculture as provided by law and also much other information of use to shippers to other states and Canada.

Please acknowledge this communication and the receipt of Bulletin No. 20.

Yours very truly,

GEO. G. ATWOOD,

Chief, Bureau of Horticulture.

IMPORTATION OF MEXICAN CITRUS TREES PROHIBITED

According to the *Los Angeles Express* no permits to ship citrus fruit trees from Mexico to California will be given, in accordance with a brief communication received by the country horticultural commission from the deputy commissioner who went to Tampico recently to inspect some stock which the owners were desirous of importing.

For some time nursery stock from Mexico has been under the ban of the California authorities because of the danger of bringing in the Morales worm, white fly and other pests into that section, and importations have been absolutely prohibited. As a result, nurserymen in that part of the state are unable to supply the great demand for citrus stock and the price of trees has increased in the last few months to an almost prohibitive figure.

In certain parts of Mexico conditions are said to be particularly favorable for producing citrus stock and parties in Covina recently applied to the authorities for permission to import several thousand trees from Tampico, Mexico. It was argued that stock grown in such an out-of-the-way place was not likely to be infested with insect pests, and if the stock was shipped it would tend to relieve the scarcity in California and be of benefit to the growers. No reason was given in the communication why permission was refused, but it is supposed the trees were found to be infected.

EVERGREEN SEEDLINGS—A CUSTOMS DECISION

N.F.—Nursery stock—Unsupported.

Board of United States General Appraisers, New York—July 25, 1910.

In the matter of protest 41313 269 Irving Rouse against the assessment of duty by the collector of customs at the port of Rochester:

Before Board No. 3

Waite, General Appraiser:

The protestants herein claim that certain items appearing on the invoices are evergreen seedlings, and should be admitted free of duty under paragraph 668, tariff act of 1909. They have been assessed under paragraph 264 providing for "stocks, cuttings and seedlings of all . . . ornamental trees, deciduous and evergreen shrubs and

vines and all trees, shrubs, plants, and vines commonly known as nursery or greenhouse stock."

No appearance was made when the cases were called for hearing, and we have only the custom-house papers before us. The mere statements contained in the protests cannot be accepted as proof of the contentions of the importers. As the records show no error in the collector's assessment, which is presumptively correct, the protests must be over-ruled.

BYRON WAITE

H. M. SUMERVILLE,

Board of U. S. General Appraisers.

The above is the result of a protest by Mr. Rouse against findings of customs officer at port of Rochester.

THE ROCHESTER COLLECTOR MAKES THE FOLLOWING COMMENT

Mr. Irving Rouse,

Rochester, N. Y.

Having but recently returned from my vacation, your letter of the 30th ultimo, referring to a decision of the U. S. General Appraisers on your protests against the action of this office in assessing duty on certain "Evergreen Seedlings," has but just come to my notice.

Replying generally thereto, I would state that the decision handed down by the Board sustains the action of this office in assessing duty on the Seedlings in question, but does so solely on the ground that there was no appearance for the protestants at the hearing set by the Board, and the decision was practically rendered in favor of the Collector's action by default.

Of course such a decision has no value as settling the case on its merits, and to all intents and purposes the correct classification of the seedlings in question is as indeterminate as before.

I would suggest that you come into the office at your convenience and look over the decision for your own satisfaction.

Respectfully,

WM. S. CHURCH,

Deputy Collector.

NEW YORK STATE LAW GOVERNING THE PACKING OF APPLES

The Commissioner of Agriculture has sent several agents of the Department into different parts of the State to see that the law relative to proper packing of apples and pears is complied with and to secure evidence in cases of violation for reference to the Attorney-General.

Section 262 of the Agriculture Law reads as follows:

Section 262. SALE OF APPLES, PEARS AND PEACHES.—No person or persons shall sell, offer or expose for sale apples, pears or peaches as and for New York State grown apples, pears or peaches if they were not grown or produced within the State of New York; nor shall they brand or label the package or barrel containing such apples, pears or peaches if they were not grown or produced within the State of New York. Any person or persons packing or

repacking or causing apples or pears to be packed or repacked, to be sold upon the market, shall pack or repack or cause them to be packed or repacked in such a manner that each separate package or barrel shall be packed substantially uniform without intent to deceive the purchaser. Any person, persons or corporation buying from a grower, apples or pears which are packed in packages or barrels, marked or labeled with the name of the grower, who causes such apples or pears to be repacked in the same packages or barrels or who uses the same packages or barrels for the packing of other fruit or apples or pears, shall erase from such package or barrel the name of the grower or packer first or originally placed thereon. But the facing of such package or barrel is not prohibited by this section.

Section 263 of the Agricultural Law reads as follows:

Section 263. BARRELS; APPLES, PEARS AND QUINCES.—The term "barrel" when used in transactions of purchase or sale of apples, pears or quinces shall represent a quantity equal to one hundred quarts of grain or dry measure, and such barrels shall be of the following dimensions: head diameter, seventeen and one-eighth inches; length of stave, twenty-eight and one-half inches; bulge, not less than sixty-four inches outside measurement. If the barrel shall be made straight, or without a bulge, it shall contain the same number of cubic inches as the barrel above described. Any person or persons making, manufacturing or causing to be made or manufactured for use in the purchase or sale of apples, pears or quinces, or any person or persons packing apples, pears or quinces in barrels for sale or selling apples, pears or quinces in barrels containing a less quantity than the barrel herein specified shall brand said barrels upon each end and upon the outside, conspicuously, in letters one and one-half inches in length with the words, "short barrel."

Section 52 of the Agricultural Law provides: Every person violating any of the provisions of the Agricultural Law shall forfeit to the people of the State of New York the sum of not less than fifty dollars nor more than one hundred dollars for the first violation, and not less than one hundred nor more than two hundred for the second and each subsequent violation.

REPORT OF THE STATE HORTICULTURAL ASSOCIATION OF PENNSYLVANIA FOR 1910

The report of this Society, under the presidency of Gabriel Hiester and the secretaryship of Chester J. Tyson of Flora Dale, has just come to our desk. The volume is one of the best edited of the reports of the Horticultural Society that we have seen. It contains a number of valuable articles on orchard fertilizers, orchard sprays, and one of special interest in view of the fact that it is more rarely treated of late than formerly, namely that on apple varieties by H. P. Gould, U. S. Department of Agriculture. This report is worthy of careful study by the officers of horticultural societies, and of imitation by many. The Secretary is to be congratulated.

The New York State Fruit Growers Association secured the coveted prize of \$500 at the State Fair at Syracuse.

Obituary

ERNEST CALVAT

In the death of M. Ernest Calvat, of Grenoble, France, the world loses its greatest chrysanthemum seedling raiser, and Europe its most eminent seedling grower.

M. Calvat began as a pure amateur, and suddenly burst upon the chrysanthemum world with novelties that were an entirely new race. From the show tables of the great exhibitions his seedlings swept everything that had been grown a few years previously. His success was phenomenal and his fame is written in letters of gold in the annals of the chrysanthemum for all time.

It was in 1891 that M. Calvat exhibited his first seedlings before the National Chrysanthemum Society of London where they aroused intense curiosity. A grand rush for his novelties followed as they were sent out year by year, until they were almost universally grown the world over. Since 1887 the chrysanthemum had received his undivided attention with the view of practicing a systematic cross-fertilization with the then known largest varieties to obtain a new race of high-class show flowers. The result of these labors is the long list of his famous flowers that have won high positions for themselves, and received awards innumerable on the Continent.

In his untimely death at the age of 58 years, the horticultural world has suffered an irreparable loss.

George Wittbold: One of the oldest florists in the country died at his home in Chicago on September 19. He was born in Hanover, Germany in 1832. He settled in Chicago in the early history of the city, gradually built up a substantial florist and nursery business which will be continued by his sons Fred, Louis, Henry and Otto.

James M. Kennedy: At Dansville, N. Y. on September 8, aged 49. Mr. Kennedy's health had been broken down for over a year. He had been in the nursery business in Dansville since 1876. For many years he was a member of the local and national nurserymen's association. He is survived by his wife, one son James E. Kennedy, his mother, a sister and brother. His loss is a severe one to the nursery life of Dansville.

W. E. Wellington, Toronto, Ont. Mr. Wellington was a member of the firm of Stone & Wellington one of the leading nursery firms in Canada. He died early in September at his home in Toronto where he had charge of the retail department of the business.

Katherine Sherman: Mr. E. M. Sherman president of the Sherman Nursery Co. of Charles City lost his daughter Katherine, an estimable young lady of nineteen, on September 12.

"I value your paper very much, and do not see how any nurseryman can get along without it."

T. D. BUCHANAN.



Prize Cups Awarded by the B. G. Pratt Co.

Doings of Societies

August 15, 1910.

Dear Sir:

The next annual meeting of the American Association of Farmers' Institute Workers will be held at Washington, D. C., November 14 to 16, 1910. At the same place and beginning November 16 will be held the annual meeting of the Association of American Agricultural Colleges and Experiment Stations.

This meeting promises to be one of the most important that the institute Association has yet held. The relation of the Farmers' Institute to the work of the Section of the Association of Colleges and Stations will be up for discussion, as well as the subject of young People's Institutes and Farmers' Institutes for Women.

Special effort should be made by Institute Directors and Lecturers to be present and take part in the discussion of these topics.

JOHN HAMILTON,
Farmers' Institute Specialist.

Greeting:

The Executive of the First Canadian National Apple Show begs to advise that you have been honored with a six months' free subscription to the Fruit Magazine of Vancouver, the only exclusive fruit publication of Canada, and the official organ of the Canadian National Apple Show, to be held at Vancouver, October 31st to November 5th, 1910, inclusive.

As one interested in the fruit industry we trust that you are interested in the greatest apple exposition ever attempted, and that you will give us your co-operation to the extent of mailing to our address, at your earliest convenience, the

names and addresses of your friends who are interested in fruit growing. The management will take pleasure in complimenting them with a free subscription to the Fruit Magazine as per your request.

The big show will be held in the magnificent Vancouver Exhibition buildings at Hastings Park, which are to be formally dedicated August 15, by the Vancouver Exhibition Association.

L. G. MOORE, Secretary.

CUPS OFFERED BY B. G. PRATT COMPANY.

An excellent form of advertising is that instituted by the B. G. Pratt Company, manufacturers of scalecide and sulfocide, New York City. The plan is to stimulate the growing of good fruit by the most improved methods of spraying by the donation of cups for worthy exhibits to be competed for at the meetings of the leading state horticultural societies the coming winter.

This firm has provided a sufficient number of cups to secure competitions for the best exhibit of box fruit at the meetings of the leading state horticultural societies of the country. Full information may be secured by writing to B. G. Pratt Company, 50 Church St., New York City.

William A. Peterson, proprietor of Peterson Nursery, Chicago, is on an automobile tour of New England. He is accompanied by Mrs. Peterson, their oldest boy, and some friends.

"GINGER" AND ITS DEFINITIONS

In using the word "Ginger" I do not mean to treat this commodity as a commercial product and tell you how the Chinese prepare same in the preserved form for human consumption, neither will I tell you its virtues from a druggist's standpoint and point out its wonderful qualities in making cramps and other stomach disturbances "vamoose."

Ginger commercially, when properly prepared, will stand on its own merits when it is either preserved by the "Chink" or Chinese process or brewed into a liquid by some manufacturing chemist. Almost everyone has seen and digested preserved ginger, which as an article of diet in the form of a relish or dessert, will hold its own with a large, round, custard pie, a bowl of prunes, a tapioca pudding or a hunk of strawberry short cake as a final wind-up to a hearty meal.

The ginger as I express and mean it, represents vim and dogged persistency in building up your nursery business on a substantial basis.

"Ginger" also represents most anything pertaining to building up a good, substantial business. Promptness in answering enquiries, being wide awake and having the faculty of increasing your sales. Plenty of "Ginger" when this word is stamped in your make-up makes every nursery man a winner. "Ginger" means reliability, honesty and a desire to live and let live; at the same keeps one always in front of the procession. Keep abreast of the times, study conditions and try to fulfill everything that is required in order to make your concern or personal interests the top notch of perfection. The greatest fault I find with the average nurseryman is not answering his mail promptly. Very often letters are pigeon-holed and answered at leisure. I have adopted the plan when circulating Surplus Stock lists to advise prospective buyers when they order in quantities of 100 trees and over, and 500 grape vines for instance, to wire in their orders at our expense. This facilitates matters especially when the nursery shipping season is advanced and time means money. The average worded telegram ranges in tollage from forty cents to one dollar and if this is an important adjunct for gaining business why not adopt this method. It is cheaper in the long run, prevents delays, keeps your packing force busy at all times and gives your office a business air when the telegraph messenger makes frequent visits. How many nurserymen can tell from day to day how long a certain variety of nursery stock will still be in surplus? When a letter is written quoting a certain variety of stock how are we to know if this variety will still be in surplus when the matter is taken up by correspondence? There is a general disappointment all around when a nurseryman is short of a certain variety and he orders same from another nurseryman fully expecting to get same, to be told finally, after waiting for several days or perhaps a week or more, that the stock has been sold. I do not mean to infer that it is practical to answer all enquiries by telegram. Judgment must be used in all cases, but where a nurseryman has a surplus of any nursery stock and a presumably bona-fide

enquiry is made, I usually adopt the plan to get after the prospective buyer with a *wire* and I make the wire or telegram as *hot* as possible in order to land the business. This is what I call "Ginger." Be alive and equal to all occasions and if you are prompt in all business matters nine times in ten, you will land the business and head off some dilatory nurseryman. Always be the first one to get your answer back to your enquirer and use your best judgment as to whether you will use a letter to do it or a telegram.

"Ginger" also means keeping abreast of the times regarding new varieties. I do not believe in fads that require too much energy in trying to put on the market certain novelties that have not been tested.

I have never sold a new variety of novelty until I was compelled to go into detail, explain its virtues and if I finally made a sale of it, the party would say, "I will try one." I believe in confining the growing end of one's business to propagating standard commercial sorts,—those that are known to be money makers. An experimental orchard on the side might be a good method to adopt to ascertain if a new variety of fruit will hold up to the wonderful merits given it by the originator. When growing family orchards it is not so necessary to the buyer, whether he makes a blunder in getting a certain tree which has been touted as a money-maker, but when you come down to growing fruit as a money-making investment any experiment on a large scale very often proves a dead loss and the grower has regrets that he did not confine himself to growing some well known, tested sort. During the past few years almost every catalogue issued by a nurseryman proclaims the discovery of some new variety of fruit. They crack it up strong, but when it is tried out in a commercial way, it falls down and proves to be not quite as good as some already tested commercial sort. In many instances the sensational variety is given a "Hair Cut" and worked over to something reliable. All this causes loss of time and money.

CHARLES A. CHAMBERS.

ROOT KNOT EXPERIENCE

I have just returned from my orchard where I planted in the spring of 1901 those two year apple trees which were affected with the Root-Knot—(or what the professors pronounced Root-Gall,) and I found the trees growing and in a very healthy condition, and in every way highly satisfactory, perfect specimens of health, well shaped, vigorous growing apple trees—writes Chas. C. Bell of Boonville, Mo., to President Stark recently.

The history of these trees is briefly as follows:—In December, 1900, they were two years old and stood in my private nursery, raised for my own planting. There were several thousand and while from all appearance they were a healthy looking lot of trees, yet most of them were more or less affected with the root-knot (or what I years ago, as a boy, used to know as root-wards, and hence did not see much harm in it). But as I was going to the annual meeting of the State Horticultural Society at Farmington, Mo., December 4, 5, and 6th, I took several of the trees with me

in order to learn what others knew and thought of said root-knots and you will find some of the discussions in the 43d Annual Report on page 184 to 186; but I find that some of the main things have been omitted in said report—namely, that I should AT ONCE dig up and burn ALL my trees in my nursery, and inasmuch as there was no law to make me do it, there should be such a law, etc. This latter demand was specially suggested by Prof. Hermann von Schrenk—and you may refer to his former statement in the same report on page 117.

The Farmington report omits my reply where I tell the Professor and others that I am going to set out into my own orchard all these root-knot trees and predict for them success; and I did so the following spring, and my healthy young orchard is today a living proof that myself and some others were right—and the Professors were wrong.

Yours very truly,

CHAS. C. BELL.

Quiz Column

INFORMATION REGARDING PECANS

Editor NATIONAL NURSERYMAN:

We are at the present time making inquiries regarding Pecan nuts (also known as Peckary nuts and Illinois nuts), and are desirous of obtaining full information regarding them especially from a botanical point of view together with illustrations if possible. We also desire information regarding the oil content of the various kinds of Pecans. Can you furnish us with the names of some firms making a specialty of Pecan nuts and trees who can supply us with the desired information?

Have you had any experience in the growing of Pecan trees or with Pecan nuts? We would very much appreciate your giving us all the information possible. If you have any printed matter or illustrations on this subject, we will very much appreciate it if you will forward same to us.

BOSTON.

ANSWER

Your questions are somewhat general, and it is a little difficult to answer them intelligently within reasonable scope. However, we are glad to offer you the following information regarding the pecan nut.

The pecan botanically is *Hicoria pecan* Britton, and is in effect the southern hickory. It ranges from Southern Indiana to the Gulf States, through Texas, into Mexico. It is found more freely on the bottom lands than on the uplands, though when transplanted to the latter it grows vigorously and bears freely. As an orchard fruit it has secured a place of great prominence during the last ten years, principally owing to the discovery of improved high quality thin shelled varieties, and also owing to the development of more certain methods of propagating it than were formerly known. The pecan nut is one of the most nutritious of all nuts. It is rich in protein and oil content. No comparison of the oil producing capacity of the different varieties of cultivated pecans has been made up to the

present time so far as I am aware. The Division of Pomology of the Bureau of Plant Industry, Department of Agriculture, Washington, is making an investigation of this character of the pecan at the present time, and it is probable that interesting information of this nature will be forthcoming before long. A bulletin entitled "Food Value of Nuts" may be obtained from the Division of Publications, Department of Agriculture, Washington, giving valuable facts bearing upon the food and commercial values of different types of cultivated nuts.

The cultivated pecans together with some of the improved hickories are now being extensively propagated by several southern nurseries. The advertisements of some of these nurseries are found in the NATIONAL NURSERYMAN, a copy of which I am sending you. Among the leading propagators of the pecan are the Nut Nursery of Monticello, Fla.; J. B. Wight, Cairo, Ga.; Glen St. Mary Nurseries, Glen St. Mary, Fla.; Griffing Bros. Nurseries of the same place; the Sherman Nursery Co., Sherman, Texas; E. E. Risien, San Saba, Texas, and many others.

The editor of this paper has had several years' experience in growing pecan trees in orchard. You ask for experience in the growing of this nut. While we cannot go into detail on the subject, we may say that our experience covers the cultivation of over 1000 acres during a period of some five years. Summing up the gist of what we have learned during that time we would say that in the first place the planter must be sure of the varieties he purchases. Many and severe disappointments are likely to follow indiscriminate and careless buying of trees from propagators who are not as conscientious or careful as they ought to be. Then the planter must perform his part in setting the trees with great care, in cultivating them as thoroughly as any orchard crop ought to be cultivated, and in protecting them from insect and fungous diseases. If all these things are done the orchard in all reasonable probability will be very profitable. On the other hand, if the planter is not prepared and willing to go to this trouble and expense he will do well to leave the pecan business entirely alone. We regard the pecan, however, as one of the great money crops of the South, and as a nut of prime importance in these days when food values are advancing so very rapidly.

EDITOR.

PROFITABLE CHERRY GROWING IN THE TRAVERSE REGION OF MICHIGAN

Reports come to us that the past season has seen some extraordinary returns from cherry orchards in the Grand Traverse Region of Michigan. It is surprising to learn that sweet cherries in that section have done remarkably, in some cases yielding as high as \$4000 per acre. This is a story which equals many of the tales which drift over to us from the Golden West. It is undoubtedly a fact that the Grand Traverse section of Michigan can produce the hardier apples in large quantity, and of fine quality. It is destined to become an important fruit growing region in the not distant future.

SPRAYING FOR PEACH FRUIT SPOT OR FUNGUS

A. B. CORDLEY AND C. C. CATE,
Oregon Agricultural College

1. Peach fruit spot probably causes a loss to the peach and apricot growers of Oregon greater than that caused by all other peach diseases.

2. The two seasons' work has demonstrated conclusively that the disease can be practically eliminated from an orchard by spraying.

3. Good results can be obtained by spraying either with Bordeaux mixture or with lime-sulphur solution. The results so far are slightly in favor of the Bordeaux mixture.

4. Some danger to foliage accompanies summer spraying with either Bordeaux or lime-sulphur. Therefore, care should be exercised in preparing the spray and in not using it too strong.

5. The fall application seems to be more efficient than any other single one. It should be made as soon as possible after the late fruit is gathered. If San José scale is present, lime-sulphur (1 to 10 or 12) should be used; if not, Bordeaux may be used if preferred. This fall application is beneficial also in controlling the peach twig blight. (See illustration.) It is possible that one annual fall spraying may be all that is necessary to control the twig blight and the fruit spot.

6. Spraying just as the buds are swelling in spring is useless as a preventative of peach fruit spot. This is, however, the most important application for the control of peach leaf curl and should not be omitted if this disease has been prevalent.

7. Peach fruit spot attacks the fruit between about May 10 and June 15.

8. The first spring spraying, therefore, should be done about May 10; the second about June 1. If the disease has been unusually prevalent, or if rainy weather favorable to the growth of the fungus occurs, the second application may be made about May 20 to 25, and a third one about June 5 to 10.

—*Better Fruit.*

NURSERY LANDS IN THE UNITED STATES

By W. H. STARK

The following strong plea by Mr. W. H. Stark, made at the last convention of nurserymen at Denver, for the ownership of land by nurserymen, instead of the somewhat common practice of renting areas, is well worth the reading, and careful consideration.

There are three fundamental factors which are the source of all wealth produced. First land, second labor, third capital. They can not be separated and what influences one affects the others. Some individuals go so far as to say there is but one basic factor, and that is land. Although this is not so, land is of great importance, especially to the nurseryman and it has become a more vital question of his success each year. The conditions are changing rapidly. The free government lands are practically exhausted and real estate is rising in value by leaps and bounds. All of this reacts on the other two factors,

labor and capital, as they are influenced decidedly by development and the increasing land values. The nurserymen of today should own or control most of their land. The successful nurseryman of tomorrow must own his land. There was a time in the past when the business could be carried on successfully by renting and thus getting new and fresh fields for each crop, but the fields have lost much of their original fertility and circumstances are different.

Commodore W. K. Vanderbilt stated that a corporation can not afford to own land, but should lease everything and keep its capital spread out as much as possible, constantly turning it over and over. The Commodore found the old school of railroaders whose slogan was "The Public be Damned." That time is past and the railroads are finding that another policy is necessary, and likewise, the Commodore's views on leasing land do not hold for present day conditions.

"You must buy land"—I might have used that for my subject instead of "Nursery Lands of the United States," but I did not want to be mistaken at the start for one of the western real estate agents, some of whom will sell the unsuspecting tenderfoot anything from a granite mountain peak to a patch of saline sage brush. But, whether you buy your land from the old settler or the real estate agent, it is necessary that you own or control it. To beat competition in the open market, to meet fluctuating conditions, to establish a permanent trade, to specialize in the line of propagation best suited to your conditions and eliminate as many of the risks as possible, it is necessary to be largely independent of rented land—to own sufficient for your own work.

When land was cheap and abundant, many of the disadvantages of renting could be overlooked, but now it is scarce and high. You can not lease land with roads and ditches laid out, and properly tilled to suit nursery work. The question of tiling alone is highly important. It is not only necessary for wet sour land but very beneficial to well drained land, as it disposes of surplus soil water in less time, thereby lengthening the growing season and also increasing the effectiveness of fertility in the soil, both of which are of special importance in the costly cultivation of trees. Whether a field is productive or not, the cost of the growing of a block of trees on it is the same. I have in mind two adjoining fields. One has been leased to various tenants for some years, the other has been carefully farmed and fertilized since the timber was cleared. The latter will produce fifty per cent more in the way of farm crops, and in nursery stock it will yield a block which is worth some hundreds of dollars more per acre. A great deal of profit is lost by planting on unsuitable land. But you cannot afford to heavily fertilize a rented field and leave most of the lime, phosphate and other elements in the ground for the next renter. Neither is it very practicable to lease land several years ahead and grow clover, cow peas or other green manures, although many heavy fertilizer bills can be saved in this way. While not wishing to be too personal, I have in mind an illustration, a model plant of its kind of permanency, where there is concentration, and

where money is invested generously in tiling and fertilizing—namely, our modest friends, the Storrs & Harrison Co. of Painesville, Ohio. You should own the land in order to keep it in a high state of fertility which will grow the old time virgin crops and make the heavy cost of propagation a profitable investment. The production of any crop which calls for intensive methods, is not profitable except where all conditions are most favorable. It might be very profitable raising sheep on \$10.00-an-acre land, for they do most of the work themselves, but it would be a losing proposition if you tried to grow corn.

Fruit and Plant Notes

VARIETIES OF PEACH FOR TEXAS

A prominent peach grower of Texas recommends the following varieties of peaches for the eastern part of the state.

GREENSBORO is the first to ripen and runs from June 1st to June 8th. It is a handsome early peach and carries well.

Following Greensboro is ARKANSAS BEAUTY. This continues the season until June 15th. It is spoken of as a peach of great beauty, about the size of Elberta with the same shape and color. It is yellow in flesh and a clingstone. Its thick skin makes it an excellent shipper.

MAMIE ROSS and CARMINE ripen the second week in June and are in season for ten days to two weeks. The fruit of these varieties is large and handsome, being beautifully blushed. The flesh is white, and a partial freestone.

HILEY or Early Bell, as it is often called, comes in about the middle of June and continues until the last week. This is a first class freestone, the flesh being firm, and of very high quality. It is a good shipper.

A variety of the same season as Hiley, and very much appreciated in eastern Texas is called SHAPPEY or Early Elberta. This is somewhat smaller than the ordinary Elberta, a difference chiefly in regard to size and earliness. It is not quite as good a shipper as the Elberta.

BELL OF GEORGIA begins to ripen the last week in June and continues the season until Elberta comes in, which is about the first week in July. Elberta is the queen of peaches of Texas as in Georgia, and in fact most of the peach growing sections. The peach season was a fairly satisfactory one in eastern Texas this year.

PLUM PROPAGATION

Among the standard varieties of plums now offered for sale by nurserymen many have originated through the careful selection of superior varieties of wild plums, improved by bringing under cultivation says Bulletin 114 of the Iowa Experiment Station. The plum may be propagated either by budding or by root grafting, but generally the former practice is the more successful as the work is done at the close of the active growing period—usually the fore part of August. In southern and eastern nurseries the Marianna and Myrobolan plums, and the peach are often used for plum stocks, but they are not recommended for use in the Middle States because they lack hardiness.

In top grafting the plum it is important that the stock and the cion belong to the same or a closely related species, otherwise the union is apt to be unsatisfactory and the tree becomes poorly developed and is short lived. For the American varieties stocks of the native species should be used. Miner is highly recommended as a stock for the Americana plums by Iowa growers.

This type of plum abounds throughout the prairie regions and does well on black prairie soil, as well as on heavy clay soils along streams, but so long as the drainage is reasonably good does well on a wide range of soils. Under average conditions spring is the best time for planting the plum, yet fall plantings may be done with success with a favorable moisture supply, provided the work is done early. Generally 18 to 20 feet apart gives ample room. Sufficient pruning should be done to correct the tendency of an excess of fruit spurs and heavily-shaded top which are liable to result in poorly colored fruit and the development of plum fruit rot. Any cross branches should be removed.

ENGLISH PRUNING AND PLANTING EXPERIMENTS

Experiments of the past few years conducted at the Woburn Experimental Fruit Farm (Ridgmont, Beds., England) have proved according to the statement of the horticultural superintendent, that the least pruning the more fruit, not only in weight, but in value as well. The carefully kept records of yield show that the unpruned tree had yielded fifty per cent more in gross value during the same period under the same conditions than the hard pruned tree of the orthodox method. The experiments of the superintendent were on bush apples, and he, therefore, advocates judicious pruning, the least the better, having in mind the making of the tree. To obtain correct results, certain leaves (the sixth from the ends of the shoots) were dried and weighed, and were found to give a very accurate measure of how the tree was doing. At intervals of three years measurements of height, spread of branches, and girth of stem were taken, and every year all the apples cropped were counted and weighed. The experiments showed that trees should be cut back as soon as they are planted, but as regards fruiting, the less pruning there is done the better. The pruning experiments have been made on 117 varieties. It was found also that the average size of the fruit was not affected by pruning.

PLANTING METHODS—As to the methods of planting trees tried, it was found that a row of trees planted on untrenched ground, the roots not trimmed but huddled into a small hole and stamped on, gained double when compared with trees planted in the ordinary way. From this experiment repeated several times and always with the same result, it was decided that it was the stamping or ramming of the trees which gave the good effect. Another series of experiments proved that two-year-old maidens were the best to plant, and trees at that age did much better than three- or four-year-old trees. It was also proved to be profitable to grow vegetables and fruit entirely separate, as the undercropping between fruit trees had not been found satisfactory or profitable.

Note and Comment

APPLES IN VIRGINIA

The apple crop in Virginia has, according to Secretary Whatley, developed into one of the finest ever harvested. The season has been favorable, the growers have been spraying thoroughly, and the quality is said to be exceptionally high. Packing demonstrations have been in progress for some time under the direction of the Experiment Station, and after Pacific Coast methods, so that the Virginia grower is out for all that can be gotten from his orchard products.

SOIL CONVENTION IN CALIFORNIA

The University of California, through its southern laboratory or branch farm at Whittier, is arranging for a convention to be held early in October for the purpose of studying soil problems peculiar to irrigated sections of California. The convention will have as leading speakers Dr. Hopkins, the noted soil expert of the University of Illinois, and Dr. King, of international fame on soil physics. Inasmuch as in all irrigated sections soil problems are becoming more and more acute, brought about by intensive methods of tillage and peculiar systems of fertilizing the land, such conventions are timely and of great importance.

DOROTHY PERKINS SHOWS SPORTING TENDENCIES

English journals make frequent notice of the sporting tendency of the rose Dorothy Perkins. It is stated that both the original white Dorothy and the later Dorothy Perkins have given many variations, and are continuing to develop such sports. White forms have appeared, but none superior to the original.

APPLE SITUATION IN WESTERN NEW YORK

Up to the middle of September, there was "very little doing" in the way of selling apples in Western New York. The situation approached that of a deadlock between grower and buyer, the former holding out for what he considered a reasonable figure, and the latter holding off for what he thought the market would stand. Reports are current that sales have been made at from \$2.00 to \$2.25 per barrel in the western part of the State. In the meantime, some of the large growers are talking confidently of packing and storing their fruit unless they can secure \$3.00 per barrel. The weather of the latter part of August and early September has been favorable for the development of high class apples. It is probable that the growers will store an unusually large quantity of fruit this season.

ROOT KNOT PAMPHLET

The NATIONAL NURSERYMAN has already drawn attention to the fact that the findings of the Committee on Root Knot investigations have been published in pamphlet form and are available to all members of the Association. Those who care to have extra copies may secure them by writing to E. A. Smith of the Jewel Nursery Company, Lake City, Minnesota, or Secretary John Hall, Granite Building, Rochester, New York.

TEMPERATURE EXPERIMENTS WITH FRUIT BUDS

The United States Department of Agriculture has been conducting a series of experiments to find out the amount of cold fruit blossoms will withstand. Some of the results were:—Apples, showing pink, 20 above zero; apples in full bloom, 26 above zero; pears, showing pink, 20 above zero; pears in full bloom, 27 above zero; peaches, showing pink, 23 above zero; peaches in full bloom, 28 above zero.

GOOSEBERRY MILDEW IN ENGLAND

We have from time to time drawn attention to the fact that what is known as American Gooseberry Mildew is causing great havoc in small fruit plantations in England. One grower reports as follows:

"The American gooseberry mildew was first noticed at Todding-ton at the end of May, 1907, on some young gooseberry bushes, the whole of which (some 12,000) were immediately burnt and the ground saturated with liver of sulphur. At the same time other bushes at some distance from the affected plot were thoroughly sprayed; but in spite of our efforts a fortnight later one or two bushes were discovered diseased amongst them, and a further lot (some 10,000) were then destroyed. This cleared out the whole of our stock of young gooseberries; but to practical men it was quite obvious at the time that our efforts were futile, for you cannot, Mr. Editor, so thoroughly destroy an acre of young growing gooseberries that not a berry, a twig, or a piece of broken leaf remains upon the ground, on the underside of which are spores in countless numbers, and to this I drew the attention at the time of some of the chief officials of the Board of Agriculture.

We, however, saw no more of the disease until the late autumn, when the strong-growing succulent shoots over some forty acres of fruit plantation were found to be attacked, in some cases not half a dozen trees on an acre, on others every bush was severely attacked, and I feel quite certain that, in spite of our endeavors to destroy the original source of infection, we had been unsuccessful, and that burning is *na remedy*."

This is a disease which prevents American growers from producing with uniform success the great English gooseberries which have for generations made Lancashire and Kent famous as gooseberry growing regions. When this disease became known and recognized in England, stringent regulations for its suppression were passed by country boards and other government bodies, and it has been found that it is almost impossible to eradicate it by exterminating plants and the tendency at the present time is to adopt milder methods, involving spraying and careful pruning.

CROP REPORT FROM SLUIS & GROOT, ENKHUIZEN (HOLLAND)

It is again time to inform you of the prospects of our this year's growing crops.

Last year's unfavorable weather is doubtless still present to the mind of every seedgrower. It lasted even until last autumn and winter.

Frequent heavy rains rendered in some districts tilling of the soil so very difficult that some autumn sowings were performed very late or not at all.

Owing to the abundance of moisture the plants of some articles could not develop very well and although last winter was very mild they could not resist the long rest and rotted, or could not develop sufficiently later on.

Moreover, it was very difficult to get our soil in good shape owing to the absence of frost and it was, therefore, not fit for planting the more delicate articles and flowers.

Last spring the weather was very favorable, but this could not prevent that there are lacking several plants in many fields.

In May and June the weather was very nice and warm and this so very much that the great heat was detrimental to a great many articles.

After this nice spell a period of cool weather with pretty nearly always cloudy skies set in, which, in the latter part of July turned into rough weather.

Nearly all plantations suffered from heavy winds and rains and the prospects of our crops got worse.

The Frank Kadlee Nursery Company, Evanston, Ills., has been incorporated with a capital of \$50,000 to do a general nursery business. Frank Kadlee, Harry T. Kadlee and Herbert H. Kordt are incorporators.

ELLWANGER & BARRY GET HIGHEST AWARD

Ellwanger & Barry of Rochester were awarded the highest prize for "the largest and best collection of fruit trees, ready to plant, embracing apple, pear, plum, peach, cherry and quince" at the State Fair at Syracuse last week. They also received the highest award for the largest and best display of grape vines and bush fruit plants and for the largest and best display of strawberry plants. In addition they received over fifty prizes for their display of fruits.

TREATMENT OF YOUNG TREES IN SUMMER

The first summer after the young tree has been transplanted from the nursery to its permanent place in the orchard is a critical period in its existence, and it is hardly too much to say that on its growing during this period depends in a great measure the future value of the tree. If its growth is checked at this time, its full development will probably never be realized. Much of the first season's success or failure will, of course, depend upon the care with which the transplanting was done in the spring, and yet attention in the summer is necessary to bring the tree through in the best condition.

The great danger the tree will encounter is the scalding effect of the midsummer sun and weakening of its vitality by the drying of the earth about its roots. The injury thus occasioned may be very much lessened by keeping the soil about the roots fine and covered with a good thick mulch. The mulching should extend as far from the trunk as the roots run, and will be all the more beneficial if it extends beyond the ends of the roots, as a greater amount of the soil will be kept moist.

The young tree also needs to be kept free from insects, as these pests are more capable of injuring the tender trees and the latter are less able to withstand their attacks. Newly set trees as well as those of medium size frequently require light pruning during the summer season to give them the proper form. Of course care must be taken not to remove enough to check the growth of the trees. A little attention given at frequent intervals during the summer will keep the young trees growing, will prevent much of their nutriment being expended in growing crooked or straggling branches and tufted masses of shoots, will check the depredations of insects and in other ways assist in the development of perfect trees.

—Exchange.

FRUIT GROWERS' CREED

Proposed by the Fruit School of the Extension Department of the West Virginia University.

He who plants a fruit-tree professes his faith. It is as if he should say, I believe, . . .

I believe!

I believe in God and in the orderliness of His Universe;

I believe in the regular procession of the seasons—spring and summer and autumn and winter;

I believe in the sure succession of youth and maturity;

I believe in the unfailing order of blossom-time and fruit-time;

I believe in the permanence of human needs;

I believe in the perpetuity of human institutions;

I believe in the steadfastness of Mother Earth, whose promise of food for her faithful children is a pledge that will not fail;

I believe in work as a divine gift;

I believe in myself;

I believe!

And in this abiding faith I work;

In this faith I plant this tree;

In this faith I will dig about its roots and nourish it;

In this faith I will protect it from vermin and disease;

In this faith I will wait for the early and the latter rain;

In this faith I will guard the blossom and the green fruit;

In this faith I will watch for the first blush of the ripening peach and the early tints of the maturing apple;

In this faith I will gather the first-fruits with a thankful heart.

Special Surplus High Quality, Quick Action, Low Price. Inquire. 14,000 Carolina Poplar, 2 and 3 yr., 10 to 12 ft. 11,000 Lombard Poplar, 2 and 3 yr., 10 to 12 ft. 2,000 Shades, general assortment, 3 to 4 in. caliper. 15,000 Shrubs, Crape Myrtle, Spireas, Lilac, Deutzia, etc. 1000 Meech Quince, 3-4 and 4-5 ft. **O. K. NURSERIES**, Wynnewood, Okla.

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

JAS. H. BOWDITCH

903 Tremont Bld., - - - Boston, Mass.

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We now have in stock **VIRGINIA NATURAL PEACH SEED** crop 1910, can fill any size order.

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We grow in large quantities and offer surplus at greatly reduced prices:

2-yr. old fieldgrown H. P. Roses: Baby Rambler; Dorothy Perkins; Crimson Ramblers; Tausendbeauty; New Blue Rambler, etc., etc. Rhododendrons; Hardy Azaleas; Clematis; Tree-Hydrangeas; Magnolias; Fancy Conifers; Blue Spruce; Peonies; Shrubs; Ornamental Trees; Seedlings, etc.

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PLUMFIELD NURSERIES

G. L. WELCH & CO., Proprietors

Fremont, Nebraska

Business Movements

INCORPORATED

Muskogee, Okla. The Muskogee Wholesale Nursery Co., capital stock \$200,000. Incorporators, C. H. Holland, H. P. Showalter, H. H. Fleming and Leo Bennett.

Maurice Fuld, who for some time has been connected with the W. W. Rawson Co., of Boston, has recently accepted a position with the Henry F. Michell Co. of Philadelphia. This company, it is understood, purposes extending their mail order trade, and as Mr. Fuld has had considerable experience in this line, they are fortunate in securing his services in connection therewith.

The capital stock of the Texas Nursery Co., located at Sherman, Texas, has been increased from \$50,000 to \$100,000.

Adolph Müller has established a nursery, to be known as the DeKalb Nursery, at Norristown, Pa., for the growing of general nursery stock. This business is located beyond the borough line on DeKalb Street.

SOUTHERN NURSERYMEN

The following officers were chosen by the Southern Nurserymen's Association, on August 25, at Knoxville, Tenn.: President, W. A. Easterly, Cleveland, Tenn.; vice-president, Aubrey Frink, Winchester, Tenn.; secretary-treasurer, A. I. Smith, Knoxville, Tenn. The next meeting will be held at Greensboro, N. C.

We are having nice seasonable weather here. I have a fine stock of seedlings and will need your help again to sell them—you do the work sure. I expect to attend the Florists Convention next month and will drop in and see you.

D. W. BABCOCK,
Berlin, Md.

AN EXTENSIVE NURSERY

The Oregon Nursery Company have now about 500 acres in growing nursery stock at Orenco, and have developed one of the largest and finest nursery plants in the United States. Their entire plant contains 1000 acres, all of which will be utilized in growing fruit trees for the needs of the great Northwest, and they will prove a very strong factor in the upbuilding of the fruit industry in this territory. Among the special features of this concern is the 1000-acre plant—the largest packing house in the United States, and the best equipped nursery office in the United States together with a business organization second to none.

Messrs. McDonald & Gill, the proprietors, are thorough nurserymen, and as thorough business men, every department of the institution is run on strictly business plans, as strict and careful attention is paid to the preparation of the soil, selection of seedlings, budding and grafting, spraying, digging, grading, packing, shipping, and delivering stock, as is paid to the office and of the business handling of the sales force, etc.

The large office building stands by itself in the center of the block surrounded by a beautiful lawn, is a model of modern architecture from a point of beauty construction as well as in arrangement, being large, two stories in height with abundance of light, the walls being glass around the entire building.

This company purchased this site, which is now their splendid nursery and town of Orenco, three years ago. Since then the Oregon Electric railway has been built through the center of the town, giving splendid shipping facilities, and a town has been built containing, besides numerous residences, a first-class hotel, two-story graded school and a good depot. Mr. Gill and Mr. McDonald have built fine country homes.

—Pacific Homestead.

The Arrowfield Nursery Co., of Petersburg, Va., has been chartered with, W. N. Roper of Petersburg as president; E. M. Hutt of Raleigh, N. C., vice-president, and W. N. Hutt, of Raleigh as secretary and treasurer. The capital stock is \$2500 to \$25,000, and the purposes are the cultivation and selling of flowers, fruit and ornamental trees, etc. The principal office will be in Petersburg.

WANTED

Office man to take charge of Order Department and do other general office work. Single man who can use typewriter preferred. Give references, state experience and age.

Glen Saint Mary Nurseries Co., Glen Saint Mary, Fla.

WANTED

Gardener and Florist at once. Single man preferred. Board and room furnished and \$60.00 per month.

MINNESOTA STATE REFORMATORY
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WANTED A competent, practical propagator, with ability to handle men. Experienced man with good testimonials. Chance to buy stock in Company if proven capable and worthy. Address:

THE WHITING NURSERY CO., Yankton, So. Dak.

CLEARANCE SALE

We have a large lot of trees on land that must be cleared this fall and winter. This stock consists of Peach, Apple, Pear, Plum, Cherry, Figs, Grapevines, English and Black Walnut, Pecans, Chestnut, Magnolia, Carolina Poplar, Oriental Plane, Linden, Box Elder, Umbrella China, Sugar and Norway Maple, Amoor River Privet, Lilac, Cape Jesamine, Roses, Arborvitae, Spruce, Scotch and White Pines, Small Fruit Plants. All this stock is first class in every respect and our prices are right. Address

THE CURETON NURSERIES
AUSTELL, GA.

BERBERRY THUNBERGI, transplanted fine 1, 2 and 2½ ft.

LOMBARDY POPLAR, young vigorous trees, branched low, 8 to 10 feet and up to 18 feet.

CAROLINA POPLAR, 8 to 18 feet, same quality.

RASPBERRY PLANTS, in 100 or 1000 lots.

CALIFORNIA PRIVETS, one and two years. 1 ft., 2 to 3 and 4 ft. Fine, bushy. Also same sheared to globe shape, 4 to 5 ft.

JOSIAH A. ROBERTS
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1 YEAR APPLE SEEDLINGS IN VERY
LARGE QUANTITIES

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Plum Farmer Raspberry and Strawberry Plants

Orders filled for nurserymen and shipped direct
to their customers

Can quote you a very reasonable price on SENATOR DUNLAP
and PLUM FARMER PLANTS

A. G. BLOUNT, Box 320, Hastings, N. Y.

Among Experiment Station Workers

PLUM CURCULIO AND METHODS FOR ITS CONTROL. BROWN ROT FOR EXPERIMENTS FOR SEASON 1909

Georgia State Board of Entomology, Atlanta, Ga. •
Bulletin No. 32

Complaints of financial losses in the peach industry of Georgia by some of the larger growers made to the Georgia State Board of Entomology has led to a series of experimental efforts to control the annual havoc of the plum curculio and brown rot disease upon the peach crop, the results of which are now given to the public in this bulletin.

Part I discusses the results of two years' extensive experiments upon the curculio by two methods of control (1) jarring, (2) liquid spraying with arsenical poisons. The method of jarring was found impractical from an economic standpoint and inefficient as a remedial measure. The heavy cost involved in the operation of a sufficient jarring force, its comparative ineffectiveness, and the brevity of the season at which effective jarring can be done, are obstacles too serious for successful manipulation in large orchards. Curculio can be controlled largely, the experiments proved, by the application of arsenate of lead at a ratio of 2 pounds to 50 gallons of water, to which is added a milk of lime solution made from 3 pounds of stone lime. Two applications are recommended, the first to be applied as the shucks are shedding, and the second two weeks later. In thrifty, healthy orchards where the foliage growth is dense, three applications are recommended, but it is unsafe to spray weak trees more than twice.

Part II discusses the brown rot experiments conducted in Georgia during 1909, giving results which promise effective control of brown rot and the curculio. The solutions made of Bordeaux mixture and of concentrated lime-sulphur resulted in injury to fruit and foliage, when used with or without the arsenate of lead, but the combination of the two remedies—self-boiled lime-sulphur and arsenate of lead—resulted in successful control, much more efficient than the self-boiled lime-sulphur alone. It appears, however, safer to apply the arsenate of lead with the self-boiled lime-sulphur mixture than alone.

The following treatment is recommended for brown rot and curculio:

Spray first about the time the shucks (not the colored petals) are shedding, with arsenate of lead 2 pounds, lime 3 pounds, to 50 gallons of water.

Make second application three weeks later, using the self-boiled lime-sulphur and arsenate of lead (8 pounds of lime, 8 pounds of sulphur, 2 pounds of arsenate of lead to 50 gallons of water).

Make the third application about four weeks after the second, using the self-boiled lime-sulphur alone, without the arsenate of lead.

If the curculio is numerous and the trees are hardy and have not been injured by the two applications already made, arsenate of lead may be added to the self-boiled lime-sulphur at the third spraying.

For earlier varieties such as Carman and Hiley make two applications: 1st, when shucks are shedding, and 2d, about three weeks later.

While the best results are secured by three applications, fairly good results may be secured from two. In this case, make first application as shucks are shedding, using the self-boiled lime-sulphur and arsenate of lead. Make second application four weeks later, using the same kind of mixture.

The sample copy you sent arrived a few days ago and I must say that I am well pleased with it, as it is the very publication I have been looking for, to help me into line with the nursery business.

M. R. INGELS,
Idaho.

THE SIMPLEX TREE BALER

BALES IN 19 STATES

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will have for late Fall and early Spring an exceptionally fine lot of
ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES;
TWO YEAR CALIFORNIA PRIVET, CAROLINA
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Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS.
Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

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It will be worth while to get our prices before buying elsewhere
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PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

Catalogues Received

Virginia Natural Peach Seed Co., 4th Ave. and Clinton Sts., Baltimore, Md. Post-card circular of 1910 seed.

The Huntsville Wholesale Nurseries. Price list for fall of 1910 and spring of 1911.

Mount Arbor Nurseries, Shenandoah, Iowa. Wholesale trade list, fall, 1910.

The Griffing Brothers Co., Jacksonville, Fla. 1910 tree catalog, illustrated.

Vaughan's Seed Store, New York City. Fall edition of Vaughan's Gardening Illustrated.

Jackson & Perkins Co., Newark, N. Y. Trade Price List. Fall, 1910, and Spring, 1911. Illustrated. Price list of peonies.

G. P. Reed, 199 Duane St., New York City. "Apple Packing, and Why to Use Caps and Cushions." Circular of fruit carriers and appliances.

Jackson & Perkins Co., Newark, N. Y. "A Few Nursery Necessities." Price list of knives, pruning shears, etc.

F. Jansen Noyes, 51 Elizabeth St., Dansville, N. Y. Price list of reliable fruit trees.

Flowering shrubs and herbaceous plants. Trees for ornament and shade. A handsomely illustrated catalog of nearly fifty pages, published by the Shatemuc Nurseries, Barrytown, N. Y.

Descriptive price list, showing illustrations of different varieties of pecans. Bay View Pecan Nursery, C. Forkert, prop., Ocean Springs, Miss.

Wholesale price list for fall, 1910, and spring, 1911, of Kelsey's Rhododendrons, Azaleas, and other hardy American plants. Harlan P. Kelsey, Salem, Mass.

Condensed Descriptive Catalog of peonies, iris, herbaceous plants and bulbs, for the fall of 1910. Finely illustrated. Wild Brothers Nursery Company, Sarcoxie, Mo.

Thorburn's Bulbs, 1910. A beautifully illustrated catalog of forty pages. J. M. Thorburn & Co., 33 Barclay St., New York City.

Farmers Nursery Co., Troy, Ohio. Wholesale Trade List.

The Conrad & Jones Co., West Grove, Pa. New floral guide for autumn, 1910.

Ave. Nursery. W. B. Cole, Painesville, Ohio. Price list for fall, 1910.

James Sons, Ussy, France. Wholesale catalogue for Autumn, 1910, Spring, 1911.

Waxahachie Nursery Co., Waxahachie, Texas. Wholesale price list for Fall, 1910.

F. & F. Nurseries, Dept. American Nursery Co., Springfield, N. J. Fall, 1910 trade list.

Bloodgood Nursery., Dept. American Nursery Co., Flushing, L. I., N. Y. Autumn, 1910 price list.

We are in receipt of a very handsome catalogue from T. S. Hubbard Company, grape vine specialists, Fredonia, N. Y., printed and arranged by J. Horace McFarland Company, of Harrisburg, Penn. The cover is of buff, with a large bunch of grapes in colors. The half tones are beautiful, being very clear and printed on high grade enameled paper.

The Storrs & Harrison Company, Painesville, Ohio. Semi-Annual price list for fall, 1910.

Vincent Lebreton's Nursery, La Pyramide, France. McHutchinson & Company, 17 Murray St. New York City, sole agents. Wholesale trade list for Autumn, 1910, and Spring, 1911.

Saddler Bros. Nursery, Bloomington, Ill. Wholesale Catalogue for Fall, 1910.

Chase Bros. Company, Rochester, N. Y. Wholesale price list for Fall, 1910, and Spring, 1911.

Phoenix Nursery Co., Bloomington, Ill. Fall, 1910, Wholesale catalogue.

Bay State Nursery Co., N. Abington, Mass. Wholesale price list, Autumn, 1910.

Ellwanger & Barry, Rochester, N. Y. Catalogue of Select Peonies Phloxes and Iris.

W. & T. Smith Co., Geneva, N. Y. Wholesale trade list, Fall 1910.

FELIX and DYKHUIS BOSKOOP, HOLLAND ROSES

Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina

A Full Line of Hardy Nursery Stock
Price List Free

FOR SALE

30,000 extra fine **PEACH**, leading varieties 5-8 and up. No. 1 2-year grapes, excellent roots and tops, very heavy.

PRIVET, 2-3, 3-4 feet.

All stock grown with greatest care and perfectly clean.

Virginia Nursery Company
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North Carolina Natural Peach Seed

1910 Crop ready for Shipment about AUGUST 15th

We will handle both country run and re-screened seed this season and will be glad to quote you at any time.

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Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

Notice to the Trade

Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

H. DEN OUDEN & SON

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BOSKOOP, HOLLAND

PEONIES

ONLY BY THE WHOLESALE

Let me send my list of OVER ONE HUNDRED Best Varieties

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Jackson & Perkins Company, Newark, N. Y. Trade price list for Fall, 1910, and Spring, 1911.

Harrison's Nursery, Berlin, Md. Wholesale list of Fruits and Ornamentals.

Gainesville Nursery, Gainesville, Fla., Catalogue and Price List.

U. S. Nursery Company, Roseacres, Miss. Catalogue of Field Grown Roses, Shrubs, Phlox, etc.

Jefferson Nursery Co., Monticello, Fla. Catalogue of Pecans, Citrus Fruits, Roses for the Southland, etc.

T. S. Hubbard Co., Fredonia, N. Y. Grape Vine Specialists. Wholesale Price List for Autumn, 1910.

Correspondence

THE LETTER THAT WAS NOT ANSWERED

The amount of money that is lost each year to different firms by not answering inquiries and correspondence of their prospective patrons promptly is enormous. The order generally goes to the firm that answers promptly. The big, well organized firm loses less in proportion than the smaller firms whose proprietor often is office force and packing force, all in one. When I used to do less business, I would let the mail accumulate for a week and sometimes a month and then take a rainy day to clean it all up. If I did not lose the sale of a lot of goods by this careless way of doing business, I was extremely lucky.

A few weeks ago, I saw that we were running low on asparagus roots. So several letters were sent out to different firms who made a specialty of handling asparagus. The replies were received right along with the exception of one from a well known firm who naturally would have received the order on account of favorable price and nearness to us. The reply, nearly two weeks after our letter was received, with the information that our letter was unfortunately overlooked. We had purchased ten thousand roots, had them come by freight, and shipped out nearly all of them before this valuable information was received.

L. J. FARMER.

80,000 PEACH TREES For Fall Delivery

Also full line of nursery stock, including Red Oak, Berberis, Thunbergi, White, Austrian and Scotch Pine, Norway Spruce, Grapes, Currants, etc.

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Married man, who thoroughly understands the growing of Nursery Stock, to take charge of the propagating and growing of a general line of stock in a Central Ohio Nursery. Business established and growing rapidly. Location and soil ideal. This is a good opportunity and worthy of investigation. For particulars write.

THE WOOSTER NURSERY CO., Wooster, Ohio

WE OFFER OUR USUAL HIGH GRADE OF NORWAY MAPLES

Straight, clean stems, 8 to 10 feet and 7 to 8 feet, also **Schwedler's** and **Reitenbach Maples**, same grades. No better trees can be grown. Orders for car load lots solicited.

10,000 Laurel Leaf Willows, bush form, 4 to 8 feet.

10,000 Spirea Van Houtti, 3 feet, bushy plants.

Send for full list.

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DETROIT, MICH.

We want a man, preferably married, to work for us or with us in growing tree stock. We have grown grafted vines successfully for ten years, and want to branch out by degrees. We want a man with at least five years' experience, of industrious habits, with good references. After one year on wages there would be an opportunity for him to invest from \$1,000 up, in the business, if he feels so inclined. We have the land, with pumping plant, implements, etc. and have a good reputation for square, fair dealing. Good accommodations, healthy climate. Prospects good for the right man. Address with particulars as to experience, and present earning capacity.

JOHN SWETT & SON

MARTINEZ, CALIF.

PEACH PITS

The Kind that
PRODUCES RESULTS

Gathered from the mountainous districts where yellows and similar diseases are unknown.

PRICE ON APPLICATION

J. Van Lindley Nursery Co.

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A. WILLIS & CO., Proprietors

OTTAWA, - - KANSAS

Offers for the Fall of 1910 and Spring of 1911 a general assortment of choice nursery stock including fruit trees, small fruits, ornamental trees and shrubs, roses, evergreens, forest seedlings, apple seedlings and peach seeds.

Book Review

FOOD FOR PLANTS, published by Nitrate of Soda Propaganda, Wm. S. Myers, Director. Tenth edition; with supplementary notes.

Includes results of original investigations and experiments on Highlands Experimental Farms, the main purpose of which has been to demonstrate the value of Nitrate of Soda in the scheme of rational fertilization on a practical scale. 234 pages, with index. Published at John Street and 71 Nassau, New York.

THE AVAILABLE COST OF NITROGEN, by Dr. Edward B.

Voorhees. A pamphlet discussing the availability of nitrogen, and its value as compared with other commercial fertilizers. Published by Nitrate of Soda Propaganda Wm. S. Myers, Director, John Street and 71 Nassau, New York.

THE HOMES OF TENNYSON.

This sketch permits the reader to enter the secluded precincts of one of the world's greatest singers, and come into intimate, though withal reverent contact with a great personality. The author of the sketch, Arthur Paterson, has traversed every foot of the country and island homes of Tennyson, has sought out the loved haunts of the poet, and has felt the charm and inspiration of some of England's finest bits of scenery. The very spirit of the region breathes

from the pages, and accompanied by the exquisite paintings of Helen Allingham—twenty full-page illustrations in color—the book makes a rare appeal to the reader.

We first stand on the Afton Down, Isle of Wight, in the month of February, in the teeth of a storm of hail and rain. By the side of the Down, among the trees, lay hidden Tennyson's island home Farringford, covered with magnolia and ivy and encircled with trees, in all the beauty and variety of the surrounding scenery—gentle valley and hardy down, smoothly flowing river and mighty rolling sea. It was on the Down and by the sea, and among the trees and flowers of this "wilderness" home that Tennyson gathered material for the work which he gave to the world. We wander with the author through the stately solitude of the beautiful island home, over the broad lawns, through the shady lanes, into the flower gardens, and through the quaint and picturesque though unpretentious mansion, all the while getting intimate glimpses of the man Tennyson and his home life.

Part two takes us to the summer home of Tennyson's declining years, Aldworth, on the borders of Surrey and Sussex. Though high on the ridge of a hill, unlike Farringford which rests within sound of the sea with winds that are keen-edged ocean breezes, Aldworth nestles in the heart of the richest inland country, five-and-twenty miles from the coast, with air though strong, of the softness of velvet.

STANDARD AGRICULTURAL BOOKS

THE GOLD MINE IN THE FRONT YARD, by C. S. Harrison. A book about flowers, both for ornamentation and commercial culture, written with special reference to Northwestern conditions. Illustrated. 280 pp., Price, 12mo. cloth \$1.00.

EVERGREENS AND HOW TO GROW THEM, by C. S. Harrison. A complete guide to selection and growth of evergreens for pleasure and profit, from seed and nursery, to wind-breaks, and hedges. Illustrated. Price, 12 mo. cloth, 100 pp., 50 cents; paper, 25 cents.

AMATEUR FRUIT GROWING by Samuel B. Green, a practical guide to the growing of fruit for home use and the market, written with special reference to a cold climate. Illustrated. 134 pp., Price, 12 mo., cloth. \$0.50; paper, 25 cents.

VEGETABLE GARDENING, by Samuel B. Green, 10th edition. A manual on the growing of vegetables for home use and the market, profusely illustrated. 252 pp., Price, 12 mo. cloth, \$1.00; paper, 50 cents.

GRASSES AND HOW TO GROW THEM, by Thomas Shaw, covering name and character of all the principal grasses in America: temporary and permanent pastures; methods in making hay, etc. Illustrated, 453 pp., Price, 12 mo. cloth, \$1.50.

WEEDS AND HOW TO ERADICATE THEM, by Thomas Shaw, giving the names of the most troublesome weed pests east and west and successful methods of destroying them. Price, 16 mo. cloth, 210 pp., 50 cents; paper, 25 cents.

FARM WIND-BREAKS AND SHELTER BELTS by Samuel B. Green. A manual of tree planting for wind-breaks and shelter with description of the most suitable trees hardy enough to stand Northwestern conditions. Practical cultural directions from seed to maturity. Illustrated. 69 pp., Price, paper, 25 cents.

ELEMENTS OF AGRICULTURE, by J. H. Sheppard and J. C. McDowell, a complete treatise on practical agriculture covering plant and animal breeding, thoroughly illustrated. A complete text book adopted in public and agricultural schools throughout the Northwest. 12 mo. cloth, 100 pp., Price, \$1.00.

POULTRY MANUAL, by Franklane L. Sewell and Ida E. Tilson. A safe guide to successful poultry culture in all its branches, fancy and practical; breeding and feeding; diseases and remedies; how to make farm poultry pay, etc., etc. 12 mo. 148 pp., Price 50 cents; paper, 25 cts. (40th thousand).

POULTRY HOUSES, COOPS AND EQUIPMENTS, by H. A. Nourse, (editor of the Poultry Herald). A book of newest plans for building practical up-to-date poultry houses, with description of coops, fixtures and poultry utensils for the farm or village poultry keeper. Profusely illustrated. 100 pp., Price, paper 25 cents.

EGG MONEY HOW TO INCREASE IT, by H. A. Nourse. A book of complete and reliable information on the more profitable production of eggs on the city lot, the village acre and the farm. The instruction in this book will make the "200 eggs a year hen," a reality for the intelligent poultry man. 128 pp., completely illustrated. Price, paper, 25 cents.

FIVE HUNDRED QUESTIONS ANSWERED ABOUT SWINE, by L. H. Cooch. This manual is practically a complete veterinary book for swine breeders. Not only does it contain answers to questions concerning diseases of swine, but it also fully and carefully compares the different breeds, treats of breeding, feeding and pasturing. Price paper, 25 cents.

THIRTY DAIRY RATINGS, Thirty complete balanced dairy rations. Treats also of the feeding and care of dairy cows, by H. C. Carpenter. Illustrated. Price, paper, 25 cents.

FEEDING AND MANAGEMENT OF LIVE STOCK, by Thomas Shaw. A series of lectures on the principles covering selection, feeding, breeding, management and marketing of cattle, sheep and swine. 100 pp., Price, 8 mo. cloth, \$1.00, stiff cover, 50 cents.

STANDARD BLACKSMITHING, HORSESHOEING AND WAGON MAKING, by J. G. Holmstrom, author of Modern Blacksmithing, gives practical instructions by a successful blacksmith. The latest and most complete book on the subject published. Thoroughly illustrated. Price, 12 mo., cloth, \$1.00.

FARM BLACKSMITHING, a complete treatise on blacksmithing by J. M. Drew, written for farmers who want a workshop where they can profitably spend stormy days. Illustrated, 100 pp., Price, 12 mo., cloth, 50 cents.

THE COUNTRY KITCHEN, Nine hundred tried and tested recipes suited to the country and contributed by readers of The Farmer. The most popular and practical cook book on the market. 154 pp., Price 12 mo., cloth, 50 cents; paper, 25 cents.

THE FARMER'S TANNING GUIDE, by G. E. Stevens, gives all the quick ways of tanning in from ten minutes to six weeks. Also complete receipts for making your own solutions. Prepared especially for farmers. Price, paper, 25 cents.

HARDWOOD LANDS, by D. A. Wallace, describes the characteristics of Minnesota and Wisconsin cut-over timber lands heretofore overlooked as suitable for agriculture. Illustrated. Price, paper, 25 cents.

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PLUM—De Soto, Wyant and Japanese varieties

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

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PEACH, 1-year and June buds. Surplus largely in heavy grades.

APRICOT and **PLUM**, a small surplus in heavy grades.

CALIFORNIA PRIVET, 30,000 1 to 2 ft.; 50,000 2 to 3 ft.; 40,000 3 to 4 ft.

CATALPA and **BLACK LOCUST** Seedlings all grades.

EVERGREENS, ROSES, SHADE TREES, ETC.

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OUR SURPLUS IS FOR SALE. LET US QUOTE YOU.

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For FALL 1910 and SPRING 1911

Grape Vines, Currants and Gooseberries
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Grape and Currant Cuttings and Light
Grade of Vines for Lining Out
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1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
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5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

Also general line of other stock. *Personal inspection invited.*

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Our Guarantee is just as big and broad as YOU choose to make it.

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Prices: In barrels and half barrels, 50c. per gallon; 10 gal. cans, \$6.00; 5 gal. cans, \$3.25; 1 gal. cans, \$1.00. If you want cheap oils, our “CARBOLEINE” at 30c. per gallon is the equal of ANYTHING ELSE. “The Whys and Wherefores of Fall Spraying.”

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FOR FALL 1910

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We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

The Willadean Nurseries
WARSAW, KENTUCKY.



THE UNITED STATES NURSERY COMPANY,

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GRAPE VINES

And small fruits for wholesale trade

Our Grape Vines were never planted under more favorable conditions than this season and we feel sure we can promise equally as fine growth as former years. Good strong roots and tops, just what you want for your retail trade. Give us a chance to quote on your wants, It will PAY you, SATISFACTION GUARANTEED.

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Meneray-Crescent Quality Stock

is the kind that will please you. We are offering a varied assortment of fruit and ornamental stock, including a limited number of forest and fruit tree seedlings, for the Fall of 1910.

If you need some really good Paeonies at the right price, let us know. Our stock of them is large and well selected.

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Spirea Van Houtti **Phlox**
American Arbor Vitae
Norway Spruce and White Pine

12 to 18 inches, 18 to 24 inches and 2 to 3 feet by the 1,000

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THE TRUE NORWAY POPLAR,
CAROLINA POPLAR, LAUREL LEAF WILLOW and
GOLDEN WILLOW, for Fall of 1910 and Spring 1911

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DODGE COUNTY NURSERY,
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35TH YEAR

Pan Handle Nurseries

WE OFFER A COMPLETE ASSORTMENT OF NURSERY
STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust "
Small Fruits	Syringas	Fruit Tree "
Maple Norway	Clematis	Catalpa Speciosa Seed.
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Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

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GREENFIELD, IND.

J. H. SKINNER & CO.

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Fruit, Shade and
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∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
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WE OFFER one-year Budded Apple in commercial varieties.

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Established 1859

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CLEMATIS PANICULATA Fine 3 year
kinds. Great variety. Prices right. PAEONIES, leading

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A general assortment of Fruit Tree Stocks, such as Apple, Pear, Myrobalan Plum, Mahaleb and Mazzard Cherry, Angers Quince, etc. Forest Trees, Ornamentals, Evergreen Seedlings, Roses, etc. The largest stock in the country. Prices very low. The very best grading and packing. Send for quotations before placing your orders elsewhere. Catalogue free.

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Offer for Fall 1910 and Spring 1911

PEACH TREES—fine assortment.

PEAR TREES—2 yr. unexcelled.

CHERRY—2 yr., none better.

CALIFORNIA PRIVET, 1 yr., fine plants.

NATURAL PEACH PITS—crops 1909 and 1910.

100,000 PEACH SEEDLINGS from buds for lining out

General line of Nursery Stock Send us your want list

Budded Pecan Trees

Japan Persimmon, Japan Walnut,
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Are Leaders to the Trade this Year.

We also offer a general line of Nursery Stock, including Fruit and Ornamental Trees, Shrubbery, Field-Grown Roses, Etc., Etc. Prices always right.

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Trees That You Can Sell "On Honor"

Your professional reputation depends upon the trees you sell. An order of "named" trees that turn out to be something else will often do you untold injury. Doubtless you have often found it difficult to secure "true-named" specimens, which require to be grown in the South. But here is a satisfactory solution of this difficulty: Trees from

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TREES, SHRUBS, ROSES AND
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We offer a
NICE ASSORTMENT OF PEACHES

in 1 year and June Buds

**Japan Plum Carolina Poplar
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Let us price your wants on the above stock.

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The most complete assortment of Ornamental Stocks,
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Fruit Tree Seedlings^and Ornamentals

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LARGE GENERAL STOCK ORNAMENTAL TREES,
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SPECIALTIES: Peach, Grape Roots, Currants, Gooseberries.

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The only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay express charges on all orders. Write for circular and prices.

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PEACH SEED, Crop 1909

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Amoor River Privet

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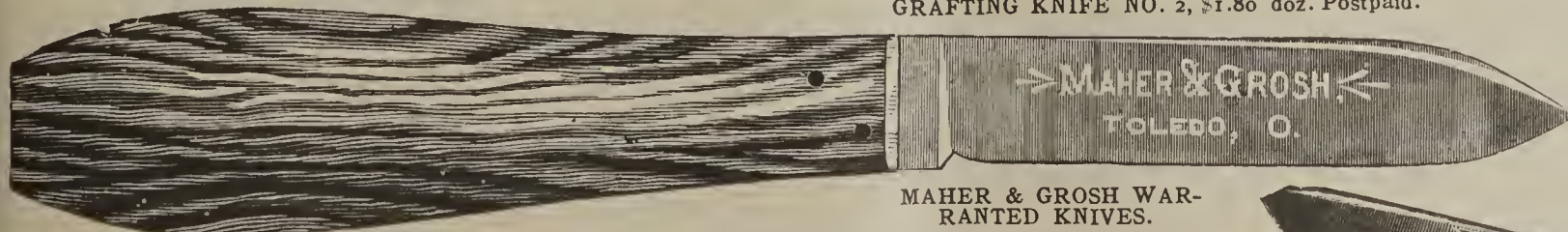
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Pocket Grafting Knives, 30, 40 and 50c. each. Nursery Pruner, 50c. postpaid. Nursery Budder, 25c. postpaid. Pocket Budder, 35c. postpaid.

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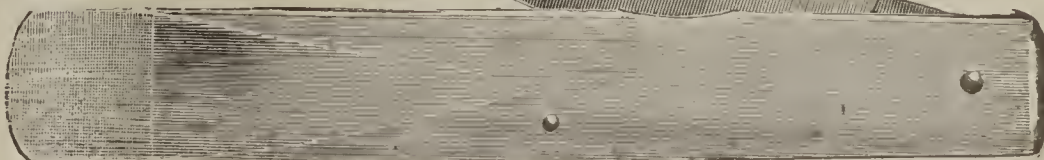
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FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

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*Advance Price List of Evergreen and Forest Tree Seedlings
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Save Your \$ \$ \$

Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

We will also have our usual assortment of Fruits both large and small.

**Shades, Shrubs, Perennials
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Want Lists will receive immediate attention

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We are heavily stocked in the following items, and can offer attractive prices:

Maple, Norway, 6 to 8 ft., 8 to 10 ft., 10 to 12 ft.

Maple, Silver, 6 to 8 ft., 8 to 10 ft.

Maple, Weirs' C. Lf., 6 to 8 ft., 8 to 10 ft.

Birch, Cut Lf., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 8 to 10 ft.

Poplars, Carolina, 2-yr., nice smooth trees, 6 to 8 ft., 8 to 10 ft., 10 to 12 ft.

Horse Chestnut, 4 to 5 ft., 5 to 6 ft.

Cherry, 2-yr., sweet and sour, 1/2 to 5/8 in., 5/8 to 1 1/16 in. and 1 1/16 in. up.

Plum and Cherry, 1-yr., 5/8 in. up, extra nice, well branched.

Hydrangea P. G., tree form, 2 to 3 ft., 3 to 4 ft.

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Roses, H. P., 2-yr. budded, Climbers, 2-yr., own roots.

Clematis, Large Flowering, 2-yr. No. 1.

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Ampelopsis Veitchii, 2-yr., No. 1.

California Privet, 12 to 18 in., 18 to 24 in. and 2 to 3 ft.

Berberis Thunbergii, 12 to 18 in., 18 to 24 in.

Also good assortment of shrubs. Send for complete price list now ready.

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looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
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Have full list of varieties for fall trade with special inducements for orders for late fall
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Not satisfied with our present large cellars, are now build-
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OUR SPECIALTIES ARE

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PEACHES

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TEA'S WEEPING MULBERRY

Ornamental
Trees and
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NO TROUBLE TO PRICE YOUR WANTS

55 Years

1200 Acres

44 Greenhouses

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A BLUE ROSE

The Greatest Rose Novelty of the Century

It flowered with us this season and
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The New Rambler (Violet Blue), hailed
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1910-For Fall & Spring-1911

WE INVITE CORRESPONDENCE NOW
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CLEMATIS
ROSES
TREE HYDRANGEAS
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IN ADDITION TO A COMPLETE STOCK OF

Fruits & Ornamentals

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APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
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ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
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63 Years

700 Acres

Berckman's Southern Grown Plants Bring Profit to You and Satisfaction to Your Trade

It's a big satisfaction to supply your trade with such un-
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it really helps you build more business.

These plants, when grown in Northern nurseries, cannot
approach the magnificent growth they make when propagated
in the South. Write
and ask us about
this, and the other
stock we grow for
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PLY THE FOL-
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**BIOTA AUREA
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The best of the
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40,000 plants in
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MAGNOLIA GRANDIFLORA. Splendid native broad-
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CITRUS TRIFOLIATA (Hardy orange) One of the best
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We'll gladly send our trade list and descriptive catalogue on
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you to push Berckmans' stock with your trade this season!

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Established
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Augusta, Georgia

Over 450 Acres
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The Farmers Nursery Company

TROY, OHIO

OFFER

APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

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BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes Catalpa Bungeii, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

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Where the Choicest of Ornamental Trees and Shrubs are grown.

NORWAY MAPLES

In all sizes from young whips to large trees

EVERGREENS

in all varieties and sizes, such as

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Schwedler Maples

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Roses, Rhododendrons,

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Red and White Flowering Horse-chestnut

Rivers' Purple and Copper Beeches

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Pendulous Trees, Shrubs, Etc.

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Offer 250 acres of Hardy Outdoor Nursery Stock in great variety, chief among which may be noted the following:

Hardy Named Rhododendrons in such varieties as Everestianum, Caractacus, H. W. Sargent, C. S. Sargent, Kettle-drum, Chas. Dickens, Lady Armstrong, Atrosanguineum, Chas. Bagley, Alba elegans and grandiflora, Giganteum, Old Port, Fastuosum fl. plena, Roseum elegans, Delicatissima, Ed. S. Rand, Jas. Mackintosh, Mrs. H. Ingersoll, and many of the Parson's Hybrids.

Andromeda Florib: transplanted 3-4 consecutive springs, bushy, well rooted plants, 6-18 inches. 20,000 to offer.

Andromeda Japonica, extra bushy, 9-24 inches.

AZALEA MOLLIS, extra bushy, well budded stock, 9-24."

AZALEA GHENT, hardy sorts, own root and grafted, extra bushy, 6-24 inches.

AZALEA PONTICA, sweet scented yellow, strong and bushy, 12-36 inches.

RHODODENDRON PRAECOX, transplanted, extra bushy, 6-18 inches.

BOX HANDSWORTH and common TREE BOX, 6" to 5 ft.

ABIES ORIENTALIS, PARRYANA, KOSTERIANA.

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PINUS CEMBRA, transplanted Spring 1910, strong, bushy, 12-30 inches.

RETINOSPORAS filifera, pisifera, pisif-aurea, plumosa, plum-aurea, obtusa compacta. TAXUS FASTIGIATA

AUREA. THUJA OCCID-LUTEA.

BEACH PURPLE, 3-9 ft. Seedlings, extra fine.

LIMES, Argentea, Dasystyla, 5-8 ft.

OAK, scarlet American, 6-9 ft. NUT, purple, 2-5 ft. extra bushy. LILACS on their own roots. VIBURNUM PLICATUM, 3-6 ft. extra bushy.

ROSES! ROSES! ROSES! in best field grown budded stock, well-rooted, true to name, Hybrid Perpetuals, Hybrid Teas, Moss, Polyanthas, Climbers, etc., in Standards, Half Standards and Dwarf, in all leading sorts.

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**We offer for FALL 1910 and
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APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

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CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

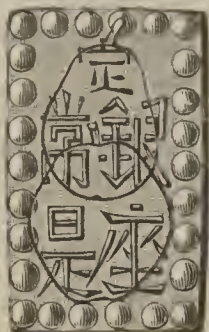
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

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We offer for Fall of 1910 and Spring of 1911 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Horseshoe Brand Bamboo Canes

Nurserymen who want a first class grade of Bamboo Canes will find the Horseshoe Brand the best to buy. Quotations on all sizes upon application. Orders should be placed six months in advance for quantities of long poles for staking trees, etc., in order to obtain proper deliveries.

Don't delay--write now.

Ralph M. Ward & Co.

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SMALL STOCK FOR TRANSPLANTING

About the first of the year we will issue our price list of small Seedling Stock suitable for transplanting in nursery rows. You will want a copy of this list, because it will offer stock you want at prices that will interest you.

Your name may be on our list for a copy but to be sure you get it, drop us a postal with your request now, and we will see that a copy goes to you when ready.

Our seedling stock is profitable to the purchaser. You buy it now at a small cost. The stock is healthy and vigorous. You plant it out in the nursery and in a few years you will have stock that will sell for many times its cost. Our sales increase every year which proves that growers find it pays to plant this stock.

THOMAS MEEHAN & SONS

Wholesale Nurserymen

DRESHER, MONTG. CO., PENNSYLVANIA

B. & A. SPECIALTIES.

BLUE SPRUCE, all sizes, 2 to 7 feet.

WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. Ask price.

ROSES, Hybrid Perpetual and Hybrid Tea varieties.

CONIFERS and **EVERGREENS**, 150 varieties.

RHODODENDRONS, Hardy Hybrid and Maxima, 50 varieties.

EVERGREEN SHRUBS, 35 varieties.

FLOWERING SHRUBS, 350 varieties.

JAPANESE MAPLES, 25 varieties.

ORNAMENTAL DECIDUOUS SHADE TREES, 50 varieties.

WEeping and **STANDARD DECIDUOUS TREES**, 50 varieties.

HEDGE PLANTS, 25 kinds.

HARDY VINES and **CLIMBERS**, 75 varieties.

PLANTS and **TRAILING VINES**, 12 varieties.

SPRING and **SUMMER FLOWERING ROOTS** and **BULBS**, 250 varieties.

DECORATIVE and **FLOWERING PLANTS**, 50 varieties.

TRAINED and **OTHER FRUIT TREES**. We can supply in any quantity and in all varieties; Nectarines, Peaches, Plums, Apricots, Cherries Pears, Apples, etc.

SMALL FRUITS, 75 varieties.

NEW and **RARE TREES**, **SHRUBS** and **EVERGREENS**, 35 varieties.

MISCELLANEOUS NEW and **RARE PLANTS** and **VINES**, 25 varieties.

HARDY HERBACEOUS PLANTS (Old Fashioned Flowers) 1,000 varieties.

NEW and **RARE CHOICE HARDY PERENNIALS**, 65 varieties.

ORNAMENTAL GRASSES, 30 varieties.

HARDY FERNS, 50 varieties.

ASK FOR WHOLESALE CATALOG

VISIT NURSERIES

BOBBINK & ATKINS,

NURSERYMEN AND FLORISTS,

RUTHERFORD, N. J.

CHERRY OFFER

WE offer the trade, in car lots f. o. b. Huntsville, Ala., 75,000 2-yr. cherry, Alabama grown, made up of the following varieties:

Black Tartarian	Dyehouse
Montmorencies	Napoleon
Early Richmond	Suda
Ger. Ostheimer	Windsor
Governor Wood	Wragg

also extra fine 1-yr. and 2-yr. cherry Louisiana and Dansville grown. Special price on car-lots.

Quotations will be promptly submitted on application. Quick action is suggested.

Stark Bro's Nurseries & Orchards Co.

General Nurserymen

Louisiana, Missouri U. S. A.

We offer for

Fall and Spring, 1910-11

A LARGE STOCK OF

Hamamelis Virginica	Hornbeam
Silver Poplar	Black Locust
Tulip Poplars	American Persimmon
Carolina Poplars	Box Elder
Sweet Gum	Viburnum Prunifolium
Ozier Dogwood	Japan Walnuts
Catalpas	Balm of Gilead
Black and White Walnuts	Laurus Benzoin

(SHRUBS)

500 M California Privet	Weigelas
Calycanthus	Kudzu Vine
Deutzias	Ampelopsis Quinquefolia
Spireas	Honeysuckle Upright White
Wistaria, all kinds.	

We offer a good assortment of Shrubs and a nice Collection of Ornamentals

We have several million Hardwood Cuttings, California Privet, Spireas, Etc.

Send for Trade Price List. Address

Forest Nursery & Seed Co.

McMinnville, Tenn.

New Haven Nurseries

NEW HAVEN, MISSOURI

Special Low Prices on Surplus

We quote the following prices for early orders to reduce surplus. The stock is strictly high grade and will be graded full and handled in the very best manner.

Our Peach, Cherry and Pear are exceptionally well rooted and nicely headed, with smooth bodies. Full assortment of varieties.

300,000 Peach, 4 1-2 to 6 feet, 5-8 to 3-4; 4 to 5 ft., 1-2 to 5-8, well branched; 3 to 4 ft., 3-8 to 1-2, well branched; 2 to 3 feet, under 3-8, part branched.

100,000 Cherry, two year, 5 to 6 feet, 3-4 up, fine; 4 to 5 feet, 5-8 to 3-4, fine.

EARLY RICHMOND, DYEHOUSE AND MONTMORENCY

Pear, two year, 5 to 6 feet, 3-4 up; 5 to 6 feet, 5-8 to 3-4; 4 to 5 feet, 1-2 to 5-8.

KEIFFER AND KOONCE.

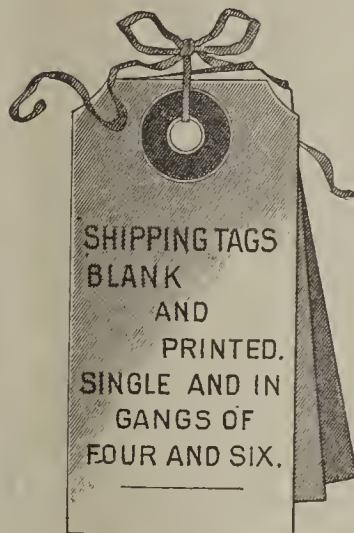
100,000 California Privet 2 yr.

Will book orders now for Fall, Winter or early Spring shipment, as may be desired. A full line of one and two year Apple and other stock priced on application. Hope to have a share of your patronage.

Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

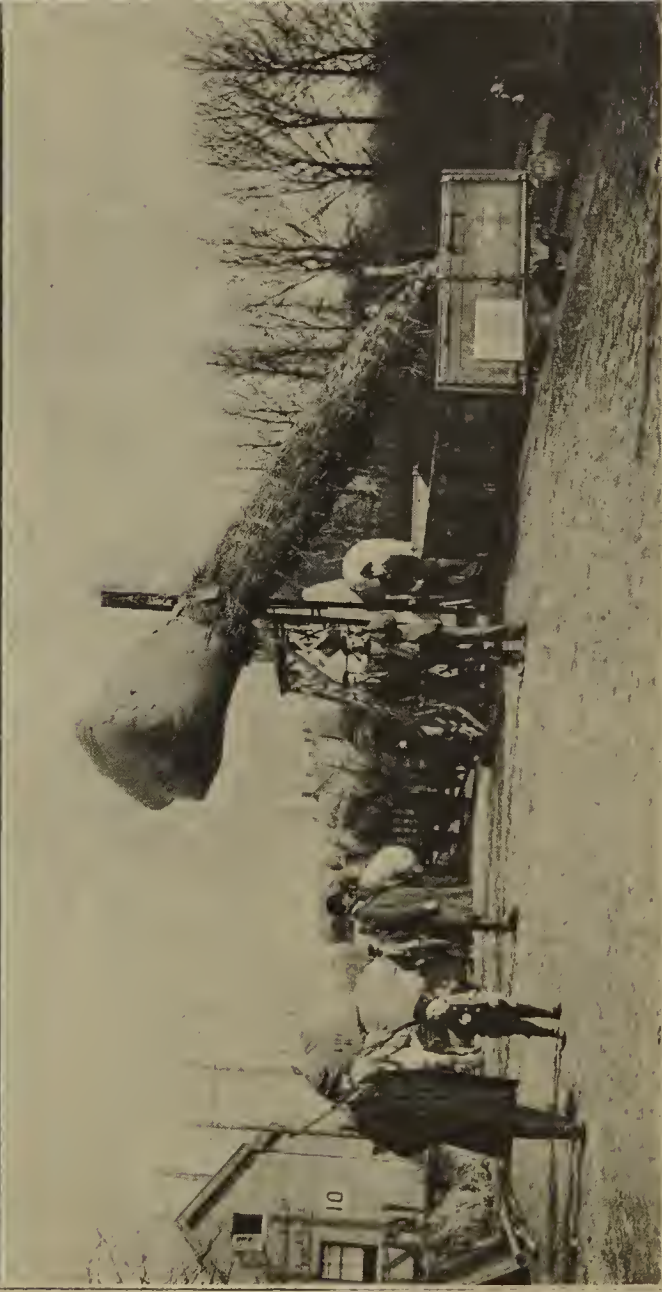
The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

Norway Maple Seedlings, Union Nurseries, Oudenbosch



Evergreens and Planes in Union Nurseries



Union Nurseries, Oudenbosch, showing shipment of seven cars of large trees packed in bales for American Steamer



Cases for America ready for Fall Shipping at Union Nurseries

SCENES IN UNION NURSERIES, OUDENBOSCH, HOLLAND

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII

ROCHESTER, N. Y., NOVEMBER, 1910

No. 11

THE UNION NURSERIES, OUDENBOSCH, HOLLAND

Specialists in the Growing of High Grade Stock and Ornamental Trees

Nursery Grounds Examined by a Representative of the National Nurseryman

In the vicinity of Oudenbosch, a small Holland town of some 3,000 or 5,000 inhabitants, between Antwerp and Rotterdam, is located a very important nursery industry.

The business in this region differs considerably from that at Ghent or at Boskoop. Here the great specialty is ornamental trees and mostly of the deciduous type. Like other regions in Holland and Belgium there are relatively few nurserymen who grow for export, but there are a large number who are in the business of producing trees and depend upon nearby European trade or exporters to absorb their stock. The Union Nurseries, however, are established with the object of catering principally to the American trade. They have the largest packing sheds and shipping equipment in Holland and grow principally such stock as Norway and Schwedler Maples, Tiliacs, Chestnuts, etc., required by the American trade. During his several visits to America, Mr. H. W. Van der Bom, the Manager, has learned the class of stock required and the proper manner in which to pack and ship it.

HOW THE NURSERY IS MANAGED

Like other European nurseries which we have written up from time to time the United States is one of the great markets, although shipments are made all over Europe and other countries. The soil in the vicinity of Oudenbosch is a black, friable sandy loam. It may be worked at any time without consideration of conditions of dryness or of moisture. This, of course, is a great advantage to the nurseryman for he may cultivate or dig whenever he pleases. There are no labor difficulties in this region. Reliable labor is abundant and efficient. Experienced men are in the employ of the Union Nurseries and are retained without difficulty. During the packing season the men work in shifts so that the

work continues without let-up for the whole 24 hours. During the day, the stock is selected and dug—at night it is packed in the extensive and well lighted sheds.



Union Nurseries—Night work. Working force divided into two gangs, night and day, during packing time.

TREE SPECIALTIES

The specialties of this nursery are ornamental trees, of which Norway Maple and its many varieties, as Schwedler and allied forms are prominent representatives. The Horse Chestnut grows beautifully in this section, while Plane (Sycamore), Linden (Basswood), Birch, Beech, Elms, Thorns and a large line of conifers are extensively cultivated. A careful system of tree rotation is practiced, conifers following deciduous trees

or vice versa, with consistent regularity.

THE FINE ART OF GROWING GOOD TREES

The propagating frames and seed beds where millions of young plants are grown are found advantageously situated and well cared for. As the stock increases in size it is transplanted annually or biennially as circumstances demand. This is in order to give space to develop both root and top symmetrically and vigorously. Nowhere have we seen finer blocks of the deciduous shade trees in the varieties mentioned with their variations than in these nurseries. The uniformity is due to the systematic methods of handling, transplanting and pruning the stock, coupled with the advantageous and favorable character of the climate and the trained men of long experience. Here we find ideal conditions for the growing of young conifers and there are to be seen great beds of seedlings in all stages of development. Selection of the best colored and propagation by grafting of the select forms is practiced consistently.

Our visit was somewhat ahead of the shipping season. It was in fact during the vacation period of the nurserymen.

Unfortunately the day was rainy and the photographs we were able to obtain were not satisfactory. Photographs taken under an umbrella rarely materialize to the satisfaction of the artist!

PACKING AND SHIPPING

The packing is done under the eye of the manager, Mr. H. W. Van der Bom, who personally passes upon the stock used in filling each foreign order. They are packed either in bales or in boxes depending upon the size of the stock. All the smaller grades go into strong paper-lined boxes. The larger stock is packed in bales with the aid of baling machines. They are placed on cars at the local station, consigned to Rotterdam, going from thence by the Holland American line unless otherwise instructed. Oudenbosch is one of the interesting nursery regions of Holland and will well repay a visit. Mr. Van der Bom is energetic, intelligent and hospitable. A visit to his establishment will bring pleasure and profit to the tourist. The firm has been represented in America since its inception by McHutchison & Co., 17 Murray St., New York.

MR. J. R. MAYHEW OF WAXAHACHIE, TEXAS, ON SUPPLY PRICES

Before Texas Nurserymen

From reports I have been able to gather relating to supply of stock for Fall and Spring trade, I am led to believe that good nursery stock is in strong demand at decidedly better prices than formerly, and that all standard stock should go at good prices very early in the season. This is especially true of dormant bud, one year peach in high grades, apple, apricot, plum, ornamental trees and shrubs, evergreens and roses. I see no reason why all surplus should not go into a ready market at satisfactory prices. Texas nurserymen should, as far as is practicable, deal with one another, for many reasons. Our varieties are pretty much the same, our plan of grading alike, and the item of freight is one not to be overlooked. You can afford to pay more for stock if you buy close to home, besides this you get as good or better service and keep Texas money at home. A further consideration, it is easier to stand one another off than it is the fellow of foreign proclivities, and I need not mention the fact that buying from one another contributes to one another's success, the best part of the consideration.



Norway Maples, Union Nurseries, Oudenbosch, Holland

Perhaps the most encouraging development of the past year is the upward revision of most retail catalogues. No longer do we see the determination of Texas nurserymen to sell stock at less than the cost of production, but on the contrary a few retailers are learning the worth of their products and are not afraid to ask their worth. This is true, however, not as a rule but rather the exception. In this connection I beg to refer you to wholesale price lists from every portion of the country, and suggest that so far as the future is concerned, the tendency of wholesale prices is upward. This must influence the retail price, and my prophecy is, the man who sells cheap trees, either to dealer or customer, during the season, 1910-11, will lose money. The day of cheap trees is past. Every item of expense that goes into growing stock must be incurred at greater cost than formerly. The labor you use is no better but costs 25% more than five years ago. This problem, gentlemen, must be met, and the only suggestion I have to offer is an upward revision in retail price lists. I have talked upward revision so much in my own household that my associates accuse me of going over bodily to the Republicans. There is yet too great a difference in retail price lists, and until there is at least a reasonable uniformity in prices, nurserymen will continue to find the question embarrassing.

There is absolutely no more reason why one nurseryman should offer trees of a certain grade and variety at a price 50% below a competitor than that a dry goods merchant should do it. Ours is perhaps the only business where this insane policy is tolerated. I hope within the very near future to see this great evil corrected, and repeat, the past year has shown some improvement.

HORTICULTURAL IMPORTERS ASSOCIATION

A meeting of the Horticultural Importers' Association was held on October 13th in New York City. This Association was formed about three years ago and includes in its memberships most of the large import houses and aims to keep its members in touch with the trend of trade in nursery products.

TREES IN THE WINTER LANDSCAPE

The Warmth of the Conifer

THE MISSION OF DIFFERENT TYPES

Many planters in setting out trees and shrubs have only in mind the appearance and effect of these shrubs during the growing season, but as a matter of fact, is it not more important to know their influence on the landscape during the bare and cheerless period of the winter months? A writer in *Park and Cemetery* of recent date has the following to say on this interesting subject:

"While we can secure much pleasure from the observation of trees in their bark, twig and fruit formation, yet the most impressive winter effects are largely produced by using the hardy coniferous evergreen with a lavish hand. In this connection, it may be said that an infinite variety of evergreens is not necessary to produce fine effects; while the list of the iron-clad evergreens, suitable for Northern climate is woefully short, yet we have no reason to be disturbed. On larger places the liberal planting of pines and hemlocks for screening unsightly buildings and checking the force of the Winter winds, will have much to do with the successful treatment of the place, for one can better appreciate the subtle beauties of a Winter landscape if protected from the force of the icy wind by an effective screen of tall and stately evergreen trees.

THE PINES

The most useful large growing pines for Northern planting are the white pine (*P. Strobus*), the Austrian pine (*P. Austriaca*), and the Scotch pine (*P. sylvestris*). The soft effect of the delicate needles of the white pine when young, and its stately appearance when old, place it pre-eminently in the lead, while the larger needles of the Austrian and Scotch pines contrast well and give variety. The only

objection to the use of the American hemlock is that it cannot be employed near large cities on account of the smoke and sulphur gases, which are always present in manufacturing districts. In both large and small places the Douglas spruce (*Pseudotsuga Douglasi*) with its dark green foliage, and the Colorado green spruce (*Picea pungens*) and its varieties (*glauca* and *Kosteriana*), give variety to the Winter landscape.

IMMEDIATE EFFECTS

For immediate effect and for filling in between the more permanent pines and spruces the Norway spruce (*Picea excelsa*) is useful, but as it very often outlives its usefulness at an early age it is only useful for the purpose of temporary effects. The mountain pine (*P. Mughus*) is the most useful of the low growing evergreens for our Northern climate and is not out of place on the smallest lawn. When massed at the foot of larger evergreens, it is extremely effective. Some of the junipers can safely be employed in the North. And by far

the most effective of all is *Juniperus Virginiana glauca*, the glaucous form of the common red cedar. It is much more hardy than the type and it will thrive in the smoky atmosphere of the city as will no other cedar. Its whitish effect, like that of the Colorado blue spruce, is particularly striking. *Juniperus Chinensis stricta* is also an evergreen of the first rank for the North.

LOW PLANTING

For low planting, *Juniperus Sabina*, the Savin Juniper is excellent, while *Juniperus communis* var. *nana*, which is still lower in growth, gives us an opportunity to produce an evergreen carpet when it is desired. As a useful hardy evergreen, we cannot overlook the Japanese yew (*Taxus*



Residence of H. W. Van der Bom, Oudenbosch.

cuspidata). It is a welcome addition to the list of really hardy evergreens. The American arborvitæ (*Thuja occidentalis*) in its numerous varieties is also useful as a Northern evergreen, but prefers the shelter given by wind-breaks.



Baling Large Trees for American Trade, Union Nurseries, Oudenbosch.

Its golden variety (var. aurea) is extremely useful, as it is really golden and adds a touch of bright color, which harmonizes well with the prevailing deep green of the majority of evergreens. In sheltered positions it is safe to use the pea fruited retinispora (*R. pisifera*) and in some cases the silver retinispora (*R. squarrosa* var. *Veitchii*), but although this is fairly hardy it is often injured by the Winter sun. While the evergreens enumerated do not include all of the coniferæ that are hardy along the region of the Great Lakes, yet they do include the very hardiest species and these are sufficient to produce a winter picture which, as far as coniferæ are concerned, will be effective and leave little to be desired.

What is true of the paucity of the really hardy coniferous evergreens in the Great Lake of Northern regions, is still more true of the broad leaved evergreens. One of the very few which is hardy under all conditions is the Yucca (*Y. filamentosa*); when planted in large masses it is a cheering sight in winter, to say nothing of its profusion of bloom in summer. It is doubly welcome, but its value as a winter plant is its chief asset; even a solitary specimen on the lawn is an evidence of life in the snow.

MONTANA NURSERYMEN AND FLORISTS ORGANIZE

The florists and nurserymen of Montana got together during the last week in September in the city of Helena, and organized an association called "The Florists' and Nurserymen's Association of Montana." The purpose of this organization is to promote floriculture and nursery industry. The officers were elected as follows: President, T. E. Mills,

Helena; vice-president, D. J. Tighe, Billings; secretary-treasurer, W. J. Hugo, Helena.

The following were elected members: Charles Burrell, John Feiden, M. Kranz, N. K. Soelberg, Fritz Roll, F. E. Burleigh, of Great Falls; R. M. Greig, Roach & Smith, Anaconda; C. F. Burton, Mr. Partington, Billings Greenhouse Company, D. J. Tighe, J. G. Smith, Joseph Hopper of Billings; A. C. Tracy, M. Langohr, Mrs. Langohr, of Bozeman; Victor Seigel, B. T. Manlove, Butte Floral Company, S. Hansen, O. C. Miller, of Butte; Peter Miller, Chas. O. Horn, M. Miller, Walter Card, W. E. Mills, T. E. Mills, J. W. Jackson, W. J. Hugo, J. W. Mallinson, John Hocking, of Helena; C. F. Dallman, of Missoula; L. L. Warden, of Lewistown; E. H. Kirkland, of Livingston; A. R. Salmon, the King Thomas Nursery Company, Fred Whiteside, of Kalispell; W. E. McMurry, Bitter Root Valley and Irrigation Company, A. H. Downing, Gray Nursery Company, J. B. Taylor, J. A. Hersham, of Hamilton; Yellowstone Nursery, of Rockvale; Stilwater Nursery Company, of Columbus; H. C. Raymond, of Stevensvill; Verne Black, of Corvallis; H. A. Briggs, of Victor.

LATEST FOREIGN APPLE MARKETS, ALSO BOSTON APPLE MARKET

Latest cable advices from English Apple markets report all as very active. The demand is good and large with high prices prevailing for the red varieties in good sound condition. Sales were made during the week that gave nets in Boston from 4.25 to 5.25 for Kings, 4.00 to 4.75 for McIntosh Reds, Snows 4.00 to 4.75, Harveys 3.00 to 3.50, Wealthies 3.75 to 4.50, Hubbardstons, 2.75 to 3.50. Northern Spys 3.00 to 4.00, Greenings 2.75 to 3.50, Baldwins 3.25 to 4.25, Nodheads 3.25 to 4.00. These prices were for strictly fine number one apples in good sound condition, even higher prices were made in some instances for extra fine quality.



Boxing Trees with Heavy Press for American Trade.

Number two and out of condition lots sold to give nets from 50c to \$1.00 a barrel less. Prospects good for fine fruit.

Boston Market conditions steady for well selected parcels, Gravensteins selling at \$3.00 to \$4.00, Alexanders

\$2.75 to \$3.25, McIntosh Reds \$3.00 to \$4.50, Wealthies \$2.50 to \$3.50, Snows \$2.00 to \$3.00, Pippins and Porters \$2.00 to \$2.50, Harveys \$2.50 to \$3.00, Hubbardstons \$2.00 to \$2.50, Pound Sweets \$2.50 to \$3.00, Common Green Apples, \$1.50 to \$2.00, Slack packed, and badly graded parcels, bring anywhere from \$1.50 to \$2.00.

GEO. A. COCHRANE.

INSURANCE FOR TREES

It has been suggested that a sort of insurance policy be issued to fruit growers by nurserymen who are willing to guarantee that their trees are true to name.

We do not know how practical the plan is, nor do we know whether the details have been worked out, but it seems that there ought to be some recompense for the fruit grower who buys a tree of a certain variety, and puts his money and time for several years into its cultivation, to find it is something he did not want.

Of course errors will occur in the best of nurseries, but as in any other business, the man making the mistake should stand the expense, not the fruit grower who is the sufferer.—*Fruit Grower and Gardener*, May, 1910.

THE CHOICE OF TREES FROM THE NURSERY

By W. T. CLARK, Professor of Horticulture, Univ. of California.

Be content, then, to limit your choice of fruits, of trees, from the nursery to the standard market varieties, and if you feel that you must plant some much wanted novelty, why, do this in your "house orchard." You can thus satisfy your own desire to grow the novelty and at the same time you do not endanger the success of the main enterprise, your commercial orchard.

Having determined the kinds of fruit you are going to grow, then you should make personal acquaintance with the nursery and if possible with the nurseryman from whom you intend to get your trees. You say, perhaps, that you cannot afford all this preliminary effort and expense. You can certainly afford it if in this way you can secure more satisfactory trees for your young orchard.

Another point the intending planter should bear in mind is that in hunting for cheap trees he can usually find them, and, as a rule, they are cheap in every sense of the word save that of being economical for the buyer. It decidedly does pay to find the best trees, to pay for the best trees and to plant these in the best way. If this thought is kept in mind, the resulting orchard should be well and properly started at least.—*California Fruit Grower*.

MORRISVILLE SCHOOL OF AGRICULTURE

The third of the three schools of agriculture established by the State of New York is to be opened on October 26. This is located at Morrisville, New York. The director, F. G. Helyar, announces that the purpose of the institution is threefold, as follows:

1. To train young people for a successful life on the farm. This is accomplished by a two years' course in Agriculture and Home Economics.
2. To discuss with the farmer and his wife, in institutes and conferences and by demonstrations, problems of rural life.
3. To investigate questions concerning the production of farm crops, animal husbandry, dairying, etc., and to furnish free information concerning farm matters.

The other two farm schools are located at Canton with St. Lawrence University, and at Alfred with Alfred University, respectively.

Doings of Societies

OHIO STATE HORTICULTURAL SOCIETY

The Annual Report of this Society for 1910 has been received at this office. This gives a comprehensive account of the proceedings of the Society at its forty-third annual meeting, held at Columbus, January 11, 1910. Among others, we find papers on the following subjects: Contrast Between Eastern and Western Orcharding; What Must be Done to Increase the Productiveness of Our Apple Orchards; The Possibilities of Apple Culture in Ohio; and Spraying Machinery.

Included with the report is a premium list of the Second Annual Ohio State Apple Show, to be held at Columbus, January 9-14, 1911.

SPRAY MACHINE COMPETITION

A new feature in the competitive part of horticultural congresses has been injected into the Third Annual Exposition of the Horticultural Congress, to be held at Council Bluffs, Nov. 10-19, 1910. This is no less than a competition designed to bring out the desirable features of different spray machines. The competition is held under the auspices and approval of the American Society of Agricultural Engineers. The competition will cover spray machines having mechanical motors, spray machines operated by power from traction wheels, machines operated by hand, and also a special class is provided for the examination of nozzles.

The fees for entries in the different classes are \$20, \$15, \$10, \$5, respectively, for the classes noted above. The prizes consist of first, second, and third prizes, gold, silver, and bronze medals, respectively.

The following points are covered in the tests of these spray machines:

1. Tests of spraying machines shall consist of:
 - a. Amount of spray mixture delivered at various pressures.
 - b. Fuel, power used, or draft of machine.
 - c. Efficiency of pump.
 - d. Efficiency of pressure regulator.
 - e. Efficiency of agitator.
2. Tests of nozzles shall consist of:
 - a. Amount of liquid discharged at various pressures.
 - b. Fineness of spray.
 - c. Uniformity and distribution of spray.
 - d. Size of spray.
 - e. Penetration of spray.
 - f. Adjustability of spray.

Construction: Under construction will be considered all features indicating durability, lubrication, convenience of adjustment, ease of manipulation, simplicity of design, proportions of working parts, materials and workmanship.

HOMEMAKING IN DRY REGIONS

Above all things let us preach homemaking on the dry farm. The fact that shade trees, orchard and garden must in many instances be carefully tended in order to produce satisfactory results has a tendency to discourage these valuable adjuncts to homemaking, but dry farming shall be most genuinely successful in proportion as we shall make it a basis of attractive homemaking, and this means diversified farming, fruit growing wherever it can be made profitable, planting of trees, growing of vegetables, and the cultivation of a wide variety of crops. All these are first essentials in the development of any community through dry farming methods.

—Hon. E. W. MONDELL, Dry Farming Congress.

THE APPLICATION OF COLD TO THE RETARDING OF PLANTS AND THE PRESERVATION OF FLOWERS

Professor L. C. CORBETT, Washington, D. C.

The modern commercial nursery handles such an immense volume of stock, of such a varied nature, and possesses a patronage scattered through so wide a territory that in order to successfully handle and pack the product and deliver it for spring planting, the old practice of heeling in the stock has been abandoned to give place to the modern system of storing in retarding houses. The season for handling the stock is so short because the plants start so quickly in the spring, even when dug in the fall and heeled in according to the old practice, that it is practically impossible to operate extensive nurseries on such a basis. Small nurseries and plant gardens, designed to meet the requirements of local purchasers only, can be successfully operated without retarding buildings or the intervention of cold storage. In extensive enterprises, however, where the sales lists reach thousands of people, and where the distribution is made through a number of states possessing a variety of soil and climatic conditions, the distribution must extend over a very considerable period of time, a period of time much greater than is allowed by the normal behavior of the plant; therefore, artificial means must be resorted to in order to hold the nursery stock in suitable condition for shipment, to provide for this wide distribution.

TYPES OF STRUCTURE USED FOR RETARDING PURPOSES

The type of structure best suited for the work of storing nursery stock is determined by the amount of stock to be handled and the location of the nursery. In those sections where long, uniformly cold winters prevail, the cellar or half underground structure is very satisfactory. Further south, where conditions are less severe, and where there is greater variation in temperature within short periods of time, the aboveground type of structure, insulated by providing multiple partitions of boards and paper in the outside walls, gives better satisfaction than any other type of structure. In those southern territories cellars become too damp and are influenced by soil temperature during the late spring months to such an extent as to greatly lessen their usefulness as retarding houses. The aboveground structure, with walls packed with sawdust, is not satisfactory because the humid conditions which must be maintained within the structure, in order to successfully preserve the nursery stock, greatly lessens the life of the structure. At

the same time a moist wall packing is a less efficient insulator than a dry one. Air spaces are, therefore, most satisfactory, particularly if the spaces are made horizontally, rather than perpendicular, so as to prevent rapid circulation of air. It is necessary that these buildings be frost-proof, as well as capable of holding or retaining cold temperatures for a long period. Large structures, designed for this purpose, are

built on a unit scheme. There are different storage rooms provided, each room being stored with material for a given geographical area. Those containing stock to be planted first are emptied quickest, and those which contain stock to go to most northern localities are not opened after the temperature has been once reduced, more than is absolutely necessary, until time for packing out arrives.

Besides being built on the unit or room plan, these buildings are provided with ventilating apparatus which can be controlled to regulate the circulation of air in the rooms as much as possible. While circulation of air is desirable, great caution is necessary in ventilating the rooms to so manipulate it as to allow the entrance of air only at times when the temperature of the room will not be raised above the desired point, or lowered beyond the safe limit for the stock in storage. Deterioration in stored stock is largely due to changes in humidity within the storage house, brought about by fluctuations in temperature. Uniformity of temperature is of greater importance than low temperature. Besides the value of the retarding house as a means of facilitating the work of the nursery during the digging and packing season, the retarding house is a great safeguard to the nurseryman. Little stock is injured from storage in buildings with a uniform temperature, as compared with the loss of stock which is dug and "heeled in." Much stock was lost under the old system from severe winter conditions, but because the temperature is never allowed to reach the danger point in the retarding houses this is not possible. Storage houses are, therefore, a great safeguard to the business.

In addition to the storage house or retarding house, a number of American nurserymen have provided an additional precaution for the purpose of maintaining a low temperature in the storage rooms much later in the season than would be possible under ordinary warehouse conditions by the installation of artificial refrigeration, consisting usually of a brine circulating system with ice or ammonia



Professor L. C. Corbett

coils as the cooling medium. It has been demonstrated that if stock can be maintained at a temperature of 34 degrees F. in the storage room throughout the storage period, that it can be kept fully twelve months without severe injury or great loss. It is a very easy matter to hold stock six to eight months under this temperature without marked deterioration. Some extensive operators who do not possess cold storage facilities of their own have devised a system by which they utilize commercial cold storage to a large extent, to facilitate the handling of their business.

The plan of procedure is to harvest the stock during the months of November and December, immediately pack the trees and shrubbery in paper-lined packing cases, providing proper packing material in the shape of sphagnum, rather than straw, and immediately place the cases so packed in cold storage, allowing them to remain until required for immediate planting. This practice is chiefly confined to nurseries operating in the extreme southern portions of the United States, who have a large patronage at the north. The early germination of the stock at the south would prohibit the delivery of the trees in satisfactory condition at the north at the proper planting season. To overcome this difficulty the above practice has been inaugurated with very excellent results. Under this system the packed stock is held in cold storage for a period of three or four months, but practices at the north require that the stock remain in the retarding house from six to seven months.

HOLDING NURSERY STOCK FROM ONE SEASON TO ANOTHER.

Attempts have been made to hold nursery stock over a season in cold storage. The experiment was only moderately successful; in fact, not considered sufficiently successful to warrant the plan as a commercial practice. The practicability of such a procedure, when necessary in moving plants from one quarter of the world to another is demonstrated, but the commercial value of such a procedure on an extensive scale is quite out of reason, from the fact that cold storage space is expensive; nursery stock is bulky and the value of the stock will seldom justify the outlay necessary for holding it through a long period in cold storage. Short storage periods, however, can be justified for the reasons above stated.

CLASSES OF NURSERY STOCK WHICH WILL PERMIT OF NURSERY STORAGE IN RETARDING HOUSES

All classes of nursery stock are handled in retarding houses, but the whole practice is based on Empirical rules. No carefully planned tests have been carried out to determine the conditions best suited to any particular class of stock, or for the general purpose house. Modern practices have developed to meet the requirements of the trade and have been quite as much influenced by economic conditions as by the actual requirements of the stock. The whole field of storage, as applied to the nursery business is a virgin one for the investigator. The necessity for retarding houses requires no argument. Their economic value is demonstrated, but the details of handling various kinds of stock, the benefit or injury to the stock, as well as the effect of

fluctuating temperatures and humidities on the vitality of the plants held in storage, are questions which our present knowledge fails to answer.

COLD STORAGE IN FLORICULTURE

Low temperatures have long been an important factor in various departments of Floriculture. In fact, a number of the most important commercial industries connected with floriculture are based upon the use of cold storage as a factor in their development. The forcing of many plants, both woody and herbaceous, is made more certain and more remunerative through the use of cold storage. The forcing of polyantha roses, of hydrangeas, lilacs, spireas and the like for the Christmas trade are all more certain if the plants have been placed in cold storage for a short period. True it is, that the etherization treatment now promises to provide another means of accomplishing like results, but the field is yet a new one and full of uncertainty. The forcing of several of the herbaceous plants, such as the lily-of-the-valley, *Lilium longiflorum* and *Lilium Harrisii*, are expedited by cold storage, although it is not an absolute necessity to success. The modern handling of lily-of-the-valley is almost entirely based on the successful treatment of the pips in cold storage. In fact, many plants and seeds which require low temperatures in order that they may make satisfactory growths, can be handled in cold storage to advantage.

The success of the modern cut flower trade is due largely to the fact that the standard flowers of the trade, such as roses and carnations, lend themselves to storage. While we have no accurate information, based on careful tests, except that provided by Mr. J. Vercier, Professor of Horticulture in the Cote-d'Or, on The Utilization of Artificial Cold in Floriculture, which is published in the *L'Industrie Frigorifique*, florists all well know that the value of both carnations and roses is greatly enhanced by subjecting them as soon as cut to a chill, which is just sufficient to check the normal vegetative functions without destroying them. The check should be severe enough to cause the flowers to rest for a period, but the rest should not be a permanent one, from which they cannot be roused. Experience has demonstrated that the condition obtaining in the ice-box or refrigerator where the atmosphere is highly charged with moisture is better suited to the purpose of the florist than the same temperature maintained artificially when the air is dry. Usually the chilling is not long continued, but it is generally believed that a few hours exposure to a low temperature greatly lengthens the period of beauty and usefulness of roses and carnations. While those practices are of great economic value, even at the present time, there is no reason to doubt that through careful investigation their value might be greatly enhanced.

The wholesale flower trade of the great cities of the United States is now greatly promoted by the use of modern cold storage appliances. While low temperatures are not desirable, a constant temperature of 40 degrees for carnations and roses is absolutely essential. Fluctuations in temperature and humidity produce great injury, while a

constant temperature at a moderate degree is the only means of holding delicate flowers over a long period. Such delicate blossoms as orchids cannot be held in storage at all. They are very sensitive to low temperature and cannot be successfully stored. What we, at present, need, are carefully conducted cold storage tests with each of the important commercial cut flowers, coupled with painstaking physiological researches to determine the exact temperature and its duration, in order that the stability of the flowers may be preserved to the greatest extent and that their duration in an ordinary living room after their withdrawal from cold storage shall be greatest. Without these painstaking researches we can never arrive at satisfactory commercial practices. The empirical rules which are followed today serve a very useful and valuable purpose.

The value of the cut flower trade in any European country or in America is sufficient to justify most painstaking and careful research along this line. It is to be regretted that more positive information cannot be given upon these important phases of the cold storage business at this time, but my studies have thoroughly convinced me of the necessity for careful and extended research into these most important commercial fields for cold storage.

MARYLAND STATE HORTICULTURAL SOCIETY

This society has issued a schedule of premiums covering the exhibitions which are to be held in the Fifth Regiment Armory, Baltimore, during the autumn of 1910. The premium list is comprehensive, including fruits, flowers, and vegetables. In addition to the horticultural exhibition the Cereal and Forage Crop Breeders Association will hold an exhibition, November 28 to December 2, when prizes will be offered for the best exhibits of wheat, oats, corn, and forage crops. This combination of societies with allied interests is highly to be commended.

PACIFIC COAST ASSOCIATION OF NURSERYMEN

An account of the proceedings of this Association at its eighth annual meeting, held at Walla Walla, Washington, July 12-14, 1910, has been published in pamphlet form. Following the reports of officers and committees, it contains a dozen papers on timely subjects, several of them having special reference to the nursery business of the Coast, delivered by growers from Washington, Oregon, and California. About fifty members were present at the sessions. The president of the Association is Geo. C. Roeding, Fresno, Cal. and the secretary-treasurer, C. A. Tonneson, Tacoma, Wash. The next meeting will be held June 21, 1911, in the State of California.

ILLINOIS STATE HORTICULTURAL SOCIETY

The Illinois State Horticultural Society, at its annual convention, Champaign, January 31 to February 10, 1911, will offer premiums in eight classes as follows:

- | | |
|-----------------------------|----------------------------------|
| Class 1. Apples, Pears. | Class 5. Pears, Grapes, Quinces. |
| Class 2. Northern Illinois. | Class 6. Vegetables. |
| Class 3. Central Illinois. | Class 7. Experiment Stations. |
| Class 4. Southern Illinois. | Class 8. Packages of Apples. |

Note and Comment

CANADA SHIPPING PEACHES TO ENGLAND

A beginning has been made by the Dominion and Ontario Departments of Agriculture in the matter of sending peaches to the mother country. The contention has been made that the shipments made are too small to be of much value, and that, besides, the peaches grown in Ontario are not the kind to suit the high class trade of the British market. But some preliminary work is necessary, and the methods of shipment now being tested give promise of satisfactory results, and certainly no time is to be lost in ascertaining the varieties that will give best satisfaction across the water.

ONTARIO APPLE PRICES

The apple crop in Ontario is one of the poorest for many years. Hundreds of orchards have no crop whatever, especially in the western parts of the province. Others have enough to supply a local demand. Where orchards have been properly looked after and thoroughly sprayed, the quantity is greater and the quality excellent. Orchards that have a crop but were not sprayed are showing plainly the effects of scab and codling moth.

Those co-operative associations having any sized crop have sold most of their apples. Prices have ranged from \$2.25 to \$2.60 for fall apples in quantity, up to \$3.75 for the better varieties of winter apples. One association sold their entire crop for \$3.00 for Nos. 1's and 2's, 75% to be No. 1. Another reports having sold for \$3.00 No. 1's and \$2.75 for No. 2's. The demonstration orchards sprayed by the Department of Agriculture in Nottawasaga township, Simcoe County, will likely grade 80% No. 1, and the apples have been sold at \$3.00 for No. 1 fall, and No. 1 and 2 winters. Early apples which have been going west have brought much larger returns than usual.

Canadian Horticulturist, October.

PRATT'S SULFOCID

That the sulphur compounds have come to stay and are to take an important place in our spraying program is receiving additional emphasis every season. Correspondence from Mr. George T. Powell, the well known agricultural expert and orchardist of Columbia County, draws attention to the success which he has had with sulfocide the past season. He says: "I have used sulfocide quite extensively this season, and I think it has some valuable fungicidal properties. I have never had a finer condition of skin on the fruit than this season. We have used Paris green in connection with the sulfocide, and have had no russetting of the fruit. There has, however, been some trouble with the lime and sulphur as summer spray here from russetting, and from spray injury. While there was no injury with sulfocide generally, there is no doubt that it can also be used too strong. In my judgment, the peculiar character of the spring developed foliage which was unusually sensitive and susceptible to injury from spray mixtures."

Correspondence

PROTECTION FOR THE ORIGINATOR OF NEW FRUITS

We believe that the question of protection to the originator of new varieties of fruits and flowers, is one that should be agitated by nurserymen so that the originator might have protection through the national government, such as is given to inventors in the way of patents, trademarks, etc.

We may say we are just beginning to prepare for our fall digging and packing here, and as a consequence are very busy at this time.

A. B.

A DISCLAIMER

ED. NATIONAL NURSERYMAN:

Dear Sir:

On Page 720 of the September issue I note what you say about the cups presented to the Western Nurseryman's Association.

The names of the Special Committee of the Eastern Nurserymen of which I am not chairman, but simply took upon myself with Mr. Chase, the duty of selecting the cups, and having them engraved, should not have appeared in print or anywhere else. The letter I wrote was signed by this Committee, but should not have appeared in connection with the matter in any way.

Your announcement was quite correct, if you would simply transfer the Entertainment Committee to the upper paragraph, and leave out the Special Committee entirely.

HARLAN P. KELSEY.

NOTE—We understand that the gentlemen who secured the Weber cup were appointed a special committee to represent the Eastern members and having done it so well they should not shrink from receiving credit for their good work.—ED.

A PERSONAL EXPLANATION

ED. NATIONAL NURSERYMAN:

Sir:

In looking through the September issue of your paper, I notice that you have an item in regard to my interests in connection with Rice Bros. Co. This article states that I have sold my interests to my brother John P. Rice, and am no longer Secretary of this Company. Wherever you procured this information, you have been misinformed, as I yet hold my stock in this Company, the same as heretofore, which is one-half of the Common Stock and part of the Preferred Stock. The President, J. P. Rice of this Company saw fit to allow strangers and attorneys to mix up in the affairs of this concern and the result was that at the last stockholders' meeting, they appointed in my place C. W. Rice as secretary. This party is an attorney in our city, but is no relative of J. P. Rice or T. W. Rice. Mr. E. H. Harris, the bookkeeper for the past year was appointed treasurer. Formerly these positions of secretary and treasurer were filled by me, but I am now in business for myself.

In accordance with the above, I would like to have this matter corrected in your next issue of your paper, and if there is any further information you would like in regard to this matter, will gladly furnish same.

Geneva, N. Y.

T. W. RICE.

Fruit and Plant Notes

TO ENCOURAGE IMPROVED STRAINS OF APPLES

The Yakima Sunnyside Nursery Company of Sunnyside, Washington, is endeavoring to encourage the development of special strains of the commercial varieties of apples by offering a prize at the Canadian Apple Show to be held in Vancouver during the latter part of October. The varieties mentioned are Spitzenburg, Winesap, and Jonathan.

ED. NATIONAL NURSERYMAN:

We are giving 100 Spitzenburg one year old trees, valued at \$50.00, bred from a tree of merit, and registered by us as a "pedigree tree," for the best Winesap tree up to 10 years old. The grower's statement must accompany a box of the apples. The statement must tell what the tree has done this season and the past record of the tree as nearly as it can be given. There is a second prize of \$15.00 cash. The same prizes and conditions prevail for the best Jonathan tree at the Vancouver apple show. We hope to see you in the "ring" and thank you for interest manifested.

We are taking this means of "spotting" the best trees of these two varieties. We have now some wonderful trees located and are only beginning our search.

Seattle, Wash.

H. M. LICHTY.

FRUIT GROWING IN PENNSYLVANIA

Professor R. L. WATTS, in Report American Pomological Society.

There is marked improvement in the handling of fruit in this state. Greater care is exercised in picking, grading, packing, and marketing. Properly handled fruit generally finds quick sale at good prices, while inferior grades are not wanted and the prices are low. A few orchardists are growing choice apples, such as Stayman Winesap, and packing in bushel boxes. These are packed at harvest and placed in city storage houses and held until prices are satisfactory. The few growers who have tried this method of marketing are greatly pleased with the results.

The fruit growers' organizations include the Adams County Horticultural Association and the Erie County Horticultural Association.

The markets of this state are unexcelled, but are poorly supplied with high grade fruits of any kind. Millions of bushels of apples are produced by general farmers who give little if any attention to fertilizing, cultivating, pruning and spraying.

The Stayman Winesap apple is receiving much more attention than any other variety. It is being quite largely planted in various parts of the state. The few orchards of this variety that have come into bearing are satisfactory. It is especially desirable as a box apple.

[Continued on page 800]

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AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

INSPECTION IN NEW YORK

The State of New York, through its Department of Agriculture, Raymond A. Pearson, Commissioner, has issued Bulletin No. 20, outlining the regulations for the inspection and certification of nursery stock under the laws of New York, and also the regulations governing the transportation of nursery stock from New York to other states. This bulletin is a valuable one, in that it gives a complete digest of the laws of the different states governing the sale and shipment of nursery stock, and also the names of the inspectors in each state. The bulletin ought to be in the hands of every nurseryman in the country, and may be secured by applying to the Commissioner of Agriculture at Albany.

THE APPLE INDUSTRY OF ONTARIO

An important question in the Province of Ontario today is, how can the apple situation be dealt with most effectively? For attention has been called by Mr. J. W. Flavelle, of Toronto, and by Prof. J. W. Crow, of the Department of Agriculture, to the fact that the last fifteen years have seen an unfortunate decline in the production of apples in Ontario, which still continues. It is evident that a systematic campaign must be commenced at once under the direction of the Minister of Agriculture. If splendid successes can be made of some orchards in the Province, as, to be sure, hundreds of Ontario growers are now making, it stands to reason that, with proper care, this can be done elsewhere. It is a noteworthy fact that the regions dominated by co-operative fruit growers' associations show the best conditions.

THE VARIETY QUESTION

Undoubtedly this is the most difficult problem the nurseryman meets. The wholesaler is constantly asking himself as well as his customers the question. "What shall I propagate, and how much of each of these varieties shall I grow?" It is quite possible to be over-conservative in regard to taking on new varieties, and on the other hand, it is very easy to be over-enthusiastic in reference to the claims of newcomers. The variety list cannot be a permanent one, and this fact cites one of the sorrows of the propagator. It is probable that a leading factor in continuing the stereotyped form of propagation, so far as varieties are concerned, is the "hand-me-down" type of plate book. The uninitiated follow the lead of this attractive guide, which is often a prolific source of trouble. It means that the same list is offered to all parts of the country, and that progress in adapting varieties to the needs of the section is not attempted. There is little or no discrimination. Should we not question our climatic requirements and select our varieties with due regard to their adaptations? In making contracts with growers for a period of years, this is indeed a serious question, and one which both the grower and the seller should consider with the greatest possible care.

SEE ADVERTISEMENT OF THE MORRISON PRODUCE AND PROVISION COMPANY IN ANOTHER COLUMN.

VARIETY OBITUARY

While we are on the variety question, it is perhaps worth while to call attention to the passing of some now properly recognized worthless varieties which, at one time, occupied a large place in the horticultural world. For instance, take that attractive and unique old fraud, *Prunus simoni*, hailing originally from somewhere in the Orient, coming to us by way of France, and the Pacific Coast, heralded as a phenomenon in the pomological world, and certainly presenting a striking appearance, both in character of tree quality and appearance of fruit, but in the test of years failing most miserably. It is true that we see fruit of this variety still adorning the stalls of the Italian vendor, and challenging attention by their peculiar tomato-like appearance; but no longer are they found in the trade lists of the East. A variant, or hybrid, whichever one may like to call it, has come and gone from the fruit lists of the deciduous regions of the Northeast.

Another set of fruits which had their day, and perhaps served the advertising purpose of the promoters, were the so-called hardy Russian apricots. A number of varieties were introduced with unpronounceable Russian names, "Nicholases" and "Skobeloffs" and the like, suggestive of ability to stand the rigors of northern regions, and were sold at fancy prices for a few years; but they, too, have gone the way of the worthless and unadapted. And such is the story of hasty introductions promoted from the exclusive standpoint of financial gain.

PROFIT IN NEW YORK APPLE GROWING

The interest in and knowledge of the fundamentals of successful apple growing in New York State by an eminent college executive is indicated by the following interesting statement presented by President J. G. Schurman of Cornell University at the meeting of the New York State Fruit Growers in Rochester, January, 1910.

Capital is not attracted to any enterprise unless remunerative, but in the case of fruit growing, the people are not aware how profitable the enterprise really is or may be made. A study of the income from 178 New York farms has been made by the Experiment Station at Cornell, these not the smaller or average farms, but averaging a capitalization of \$11,000, and the investigation shows that there are good chances for making money in agriculture in New York. But the most striking thing in this investigation is the showing made by the fruit farms, a per cent of 19.8 having been realized on investments in fruit farms as against an average of all farms (including fruit farms) of 11.1 per cent. The farmer's salary or labor income on these 178 farms averaged \$981, while the labor income on the fruit farms alone averaged \$2,209. Eleven fruit growers of the group cleared above \$2,500 each annually, while only one dairyman and no general farmer did this.

A noteworthy showing of expenses and returns on a fruit farm of nine acres has been made by a recent graduate of the College of Agriculture at Cornell, which represents his first year of work after graduation on his home farm.

EXPENSE OF CARE

Area of 9 acres, mostly Baldwins, 34 years old.

Pruning	\$20.00
Spraying twice, labor and team	30.20
Spray materials	22.00
Plowing	15.33
Tillage, 5 times	17.50
Drawing and spreading 100 loads manure	17.50
Harvesting, picking, packing and picking drops	196.50
Hauling	10.00
Barrels	305.00

Total expense \$ 634.03

Yield	900 bbl.
Gross income	\$2,400.39
Net income	1,766.36
Net, per acre	196.26

Valued at \$200 per acre, this orchard returned 100 per cent. on the investment, or, considering 6 per cent. a fair return on any investment, then this farm was worth \$3,271 per acre.

ROOT KNOT

The Experiment Station orchard is not yet old enough to furnish us with definite data for publication. The orchard was set in the spring of 1902 and as yet the trees have not matured a crop of fruit. We have, however, not been able to notice any difference in the blooming ability of the sound and root knot trees. Those affected with Root Knot are, however, distinctly smaller than the others. I have done no work on the Biology or the Communicability of the Root Knot trouble since 1904.

Mountain Grove, Mo.

Yours truly,
F. W. FAUROT.

HOW SOIL LOSES WATER

The capillary water of the soil is removed in two ways: First, by the action of plant roots, and second, by means of evaporation. As the capillary water from a soil is evaporated, the surface tension of the water tends to approximate the soil particles until by the time all of the capillary water is removed the soil particles have been brought within cohesive range of each other. This causes the soil to shrink in volume, and the soil particles being now brought within close enough relationship with each other that the power of cohesion may act between them, water readily passed from one soil grain to another. This has been incorrectly called capillarity.

It is not because capillary tubes are formed in a crusted soil that water is lost by capillarity, but because the soil grains during the drying process have been so closely approximated to each other that the dry soil grain steals the water from the moist ones below and carries it in a stream from one soil particle to another until it finally reaches the uppermost one, when it is carried off into the air by evaporation. If a soil that has been subjected to the drying and contracting process be stirred with any implement the soil particles will be separated so far apart that they will lie beyond cohesive range of each other. In a soil so treated it is next to impossible for water to travel from one soil grain to another and thus the efficacy of the dust mulch. In this case the water rises by capillarity from the moist soil below until it comes into contact with the dry, loose and separated particles of the mulch, where it is diverted from its upward course.

DR. H. H. STONER,
Dry Farming Congress.

FRUIT GROWING IN PENNSYLVANIA.

[Continued from page 797]

APPLES

BALDWIN—The most popular apple in the state. Grown in every county, but succeeds best at high altitudes and in soils where the chestnut thrives. On account of its tendency to bear every other year and of the fruit to drop before harvested, the variety is not a general favorite among commercial growers. It is a profitable apple, however, when properly handled, and adapted to location where planted.

YORK IMPERIAL—This is the leading commercial apple in the Southeastern part of the state. Perhaps 75 per cent. of the trees in the Adams County district are York Imperial. The lack of quality is about the only point raised against this variety.

NORTHERN SPY—No better apple is grown in this state. It is popular in northern sections and a few growers are considering handling it in boxes in the Eastern markets.

ROME BEAUTY—Possesses many good points. Loses quality soon after mid-winter.

SUMMER RAMBO—A superb summer apple, and profitable with several growers.

PEARS

There are very few large orchards in the state. Best and leading varieties are Bartlett, Seckel, Lawrence and Clairgeau. Bosc is also good. Blight makes the crop very uncertain and generally unsatisfactory.

PEACHES

Elberta is probably the most largely planted. Many other varieties are grown, as Iron Mountain, Smock, Stump, Sneed, Crosby, Ray, Late Crawford, Old Mixon, Champion and Fox.

PLUMS

The Japanese plums are not popular. The York State prune is probably our greatest commercial variety. It succeeds wherever the German prune thrives. It is a highly profitable variety in Erie County. Other desirable varieties are Lombard, Abundance and Bavay. Trees of many other varieties are found here and there, but the ones mentioned are most extensively planted.

CHERRIES

Early Richmond is the most popular sour cherry, but Montmorency is better and will probably take its place in commercial orchards. All of the sweet varieties may be found. Windsor does remarkably well in the mountainous districts.

GRAPES

CONCORD—Probably ninety-five per cent. of the grapes in the Erie grape belt are Concord. Other varieties of importance are Moore's Early, Delaware, Niagara and Worden.

STRAWBERRIES

Sample, Wm. Belt, Gandy, Brandywine, Champion, Bubach and Clyde, do well, but there are probably hundreds of varieties planted in this state.

RASPBERRIES

Cuthbert is the leading red raspberry. Gregg, Cumberland and Kansas most popular black caps.

BLACKBERRIES

Snyder leads as a commercial variety. Other varieties planted are Kittatinny, Eldorado, Erie, Rathbun, Wilson and Early Harvest.

GOOSEBERRIES

Downing is far in the lead.

CURRANTS

Fay most largely planted. Wilder and Eclipse are profitable.

No special information on insects and plant diseases. The leading orchardists control the scale, codling moth and other destructive insects and diseases, while these enemies play havoc in the hundreds of orchards owned by general farmers.

Nursery and Orchard inspection work is in charge of Prof. H. A. Surface, State Economic Zoologist, and splendid service is being rendered for nurserymen as well as fruit growers.

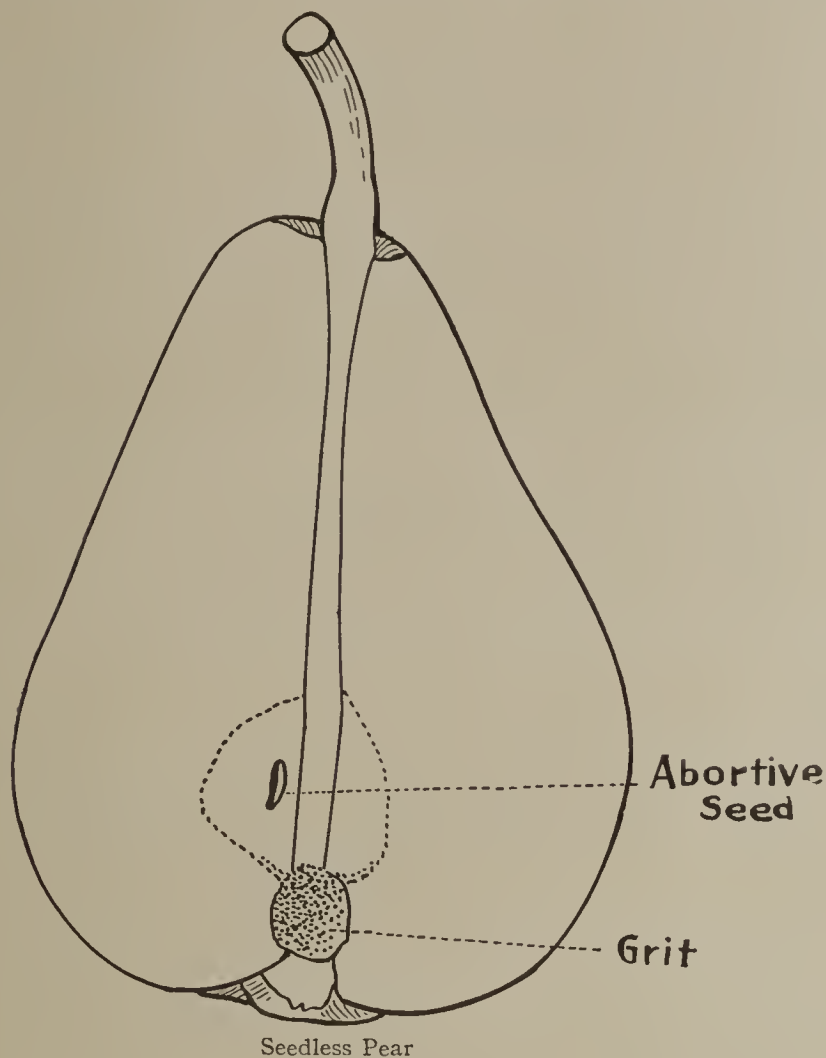
Very little progress has been made in storage for fruits outside of cities.

NURSERYMEN HAVE RESPONSIBLE TASK

Orchard planting is somewhat like life insurance, in more ways than one, says a writer in *California Fruit Grower*. It has an investment that brings a great deal of satisfaction, and it usually pays its annual dividends, but the most decided similarity is the fact that a great deal of talking must be done by some one on the subject before the policy is ever written, or the orchard planted. In the case of the orchard this talking usually falls to the nurseryman or the salesman. There is scarcely a home that is provided with fine fruits through the season, but its owner was talked into it by a tree man. Go further and you will find that a large percentage of the commercial fruit growers were also originally argued into the business by energetic tree men. Study the history of the prominent fruit sections where peaches are shipped by the hundred carloads, and if you will trace the business back to its infancy you will find almost invariably that it was started through the work of some nurseryman or tree salesman. The credit which the state has made for production of the finest peaches in the world, therefore, may well be divided between the nurseryman and the orchardist. This is a big responsibility which the nurseryman carries, and therefore he should exercise care that he grow only the best varieties of fruit and see to it that all orders are filled with good stock. The nurseryman should be an intelligent guide to the fruit grower. The average planter looks to him to be well posted as to what, when and how to plant, and the nurseryman should aim high in his business and try to post himself so thoroughly that he may not have to turn any customer or seeker for information away unsatisfied. The position of the nurseryman is one of great importance to the country. It is a calling that one cannot just drop into and succeed at. He must go into it with earnestness and enthusiasm and make it a life study as well as a life business in order to be of any value to the country, or make anything out of it for himself. The nurseryman can only serve his part properly in the business by making it his permanent occupation, and he cannot give his customers satisfaction unless he is competent to advise a tree planter as to the proper trees for planting under all conditions.

A SEEDLESS PEAR

We are in receipt of a specimen pear forwarded by the Ford Seed Company, of Ravenna, Ohio. The senders state that it is seedless and coreless, and their claim is very nearly substantiated by an examination of the fruit. Two specimens were received, both of which were cut and examined. In one, there was an abortive seed with partially developed embryo carpels. In the other, there was no appearance of any seed whatever, and no carpels. There was, however, in both cases a considerable accumulation of grit at the apex of the embryo, just below the calyx tube. On the whole, the fruit comes as near the seedless and coreless variety as we have seen.



The pear is medium size; regularly pyriform; shallow, rather smooth cavity; short, curved stem, inserted in a shallow basin. The flesh is yellowish white, tender, melting, sweet, and very pleasant without being highly aromatic. The fruit is somewhat larger than the Lawrence, and perhaps not quite as good in quality. Specimens remained on our office desk from the 15th of September until the 6th of October, in very good condition. This variety seems to us worthy of careful test, and probably worthy of being introduced.

VARIETY IN THE LIFE OF THE HORTICULTURAL IMPORTERS

The New York Horticultural import houses receive and ship some peculiar horticultural products sometimes. When we visited McHutchison & Co., the New York import house, recently, they were exporting a consignment of 300,000 Galax Leaves to Europe. These are used for Florists wreaths, etc. They also had just received a consignment of 215 bags of English soil to be used for growing Rhododendrons in this country. Their regular shipments of plants, Bay Trees, etc., from Belgium consisted of 429 packages, most of which went in carload lots to the Pacific Coast and other far distant points. McHutchison & Co. advised us that their business was up to date far ahead of last season.

Quiz Column

A NURSERY MUSEUM

ED. NATIONAL NURSERYMAN:

Dear Sir:—Having found a stray sheet of your paper, am desirous of seeing a copy. Am going to take charge of an experimental farm here and will have some good things to tell, as I am an old nurseryman. Why is not the Blue Catalpa more planted? Is there a permanent place where we can ship for exhibition, great specimens of walnuts, pecans and of ornamentals? Uncle Sam will receive them but nurserymen should have a place for all novelties and new things. Start it up

Tulsa, Okla.

E.

ANSWER

We are not quite clear as to your meaning. You ask if there is a permanent place where fruits, nuts, and so forth, may be placed on exhibition. The nurserymen of the country do not maintain any museum or exhibition hall, but there are many colleges of agriculture which do maintain such museums. Cornell University is among them. There is at Cornell a large collection of nuts, including pecans and walnuts, and specimens forwarded are given permanent place in the display cases. The various experiment stations usually receive novelties, new things, supposedly worthy of trial. Kindly write us at greater length just what you have in mind.

ED.

Exhibitions

FIRST CANADIAN NATIONAL APPLE SHOW

Vancouver, B. C., Oct. 31 to Nov. 5, 1910.

Buildings with a total of 98,640 square feet of space will house this great exhibition of apples from every province of the Dominion, from England, Australia and the United States. In the big arena of the Vancouver Horse Show Building will be found the District, Limited two box, two barrel, two basket, two jar, and two plate contest, and box exhibits. The show ring is 75x199 feet, and the interesting arrangement planned for the display of the fruit is an incline twelve feet high, extending around the ring, thus giving the appearance of a veritable cascade of apples. Every portion of the exhibit can be seen from any seat in the spectators' galleries, with their seating capacity of 3,000. On a raised platform the 48th Highlander's Military Band, in full Highland costume, will be stationed. This famous musical organization, which stands today as Canada's favorite band, has been engaged at an expense of \$5,000 to come direct to the Apple Show from Toronto, Ontario, returning directly to the same place after the exhibition is over.

The carload exhibits and plate displays will be housed in a temporary building on Alberni Street, the former on a 17-foot incline around the building, the latter on a display table 250 feet in length, with space for 9,000 apples.

It is expected that there will be 12,600 boxes or 21 carloads of apples on exhibition, and \$25,000 in prizes is provided.

There will be 115 contests, exclusive of plate display contests in which two prizes amounting to \$5.00 are offered for each variety, and the prizes include, besides \$20,000 in cash, valuable medals, diplomas, orchard land, nursery stock, spray material, etc. A pomological convention of fruit growers throughout the Pacific Northwest will be held in connection with the Apple Show for the purpose of formulating recommendations to the American Pomological Society in regard to the quality ratings of a number of varieties of winter apples grown with great success in this region.

The chief judge will be Professor H. E. Van Deman, the expert pomologist of Washington, D. C., while the associate judges will be Mr. H. W. Bunting, St. Catharines, Ont.; Mr. Martin Burrell, M.P., Grand Forks, B. C.; Prof. F. C. Sears, Amherst, Mass.; Prof. Wilbur K. Newell, Gaston, Ore.; and Prof. John Craig, Ithaca, N. Y.

Business Movements

The nursery division of the well known Sioux City Seed and Nursery Company, of Sioux City, Iowa, has recently been purchased by the Whiting Nursery Company, of Yankton, S. D. The seed business will be continued by the Sioux City Seed Company, while the nursery business will be handled by the Whiting Company.

NOTICE!

Having bought the Nursery business of the Sioux City Seed & Nursery Co., of Sioux City, Ia., to whom we have sold and turned over our seed business, we feel that we are in a much better position to serve you than ever before, as we will now devote our entire capital and energy to the Nursery business, making it second to none in the entire Northwest. See letter below.

THE WHITING NURSERY CO.,
By Geo. H. Whiting, Pres.
Sioux City, Ia., Sept. 6th., 1910.

To Whom it May Concern:

We have this day sold the Nursery department of our business to the Whiting Nursery Co., of Yankton, S. Dak., who will take immediate charge and whom we recommend to your confidence with great pleasure.

SIoux CITY SEED & NURSERY CO.,
By H. A. Johns, Pres.

We enclose \$1.00 in currency to renew subscription to the NATIONAL NURSERYMAN. "We could not continue in business without the NATIONAL NURSERYMAN."

Very truly yours,
McKAY NURSERY CO.

L. A. Berckmans of the well known southern firm, P. J. Berckmans' & Co., Augusta, Ga., called on nurserymen in Rochester and vicinity, the last days of September.

The Whiting nursery company has purchased the nursery business of the Sioux City Seed & Nursery Company and has transferred its own seed business to the Sioux City Company. This will just about double the business of the Whiting Company and the disposing of their seed business will allow them to devote all their time to their enlarged and growing nursery business. This transfer makes the Whiting Company by long odds the largest concern of its kind in the Northwest and also puts it in position to maintain its big lead.

HOW AND WHEN TO SECURE A RELIABLE SUPPLY OF HEALTHY PEACH PITS IS A MATTER OF CONCERN TO PEACH GROWERS AT THE PRESENT TIME. NOTE AD. OF THE MORRISON PRODUCE AND PROVISION COMPANY.

NATIONAL NURSERYMAN:

Enclosed find check for \$1.00 for which you will continue our subscription for one year.

We are glad to note the progress you have made the past year.
SNYDER BROS.

Enclosed find \$1.00. Can't afford to miss the journal for even one issue.

Yours truly,
CLINGMAN NURSERY & ORCHARD CO., Ltd.,
La.

C. H. Kessler of Kansas City, Mo., has had a very pleasant summer vacation in Colorado.

FELIX and DYKHUIS BOSKOOP, HOLLAND ROSES

Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina

A Full Line of Hardy Nursery Stock
Price List Free

F. KNIPER, Nurseryman

Purveyor to the Court, AMSTERDAM, HOLLAND

—offers—

1 YEAR APPLE SEEDLINGS IN VERY
LARGE QUANTITIES

in the measures of 3-5 mell, 5-F and F-12 mell.

Special Surplus High Quality, Quick Action, Low Price. Inquire.
14,000 Carolina Poplar, 2 and 3 yr., 10 to 12 ft.
11,000 Lombard Poplar, 2 and 3 yr., 10 to 12 ft. 2,000 Shades, general assortment.
3 to 4 in. caliper. 15,000 Spruce, Crape Myrtle, Spireas, Lilac, Deutzia, etc. 1,000
Meech Quince, 3-4 and 4-5 ft. O. K. NURSERIES, Wynnewood, Okla.

JAPANESE YEW (*Taxus cuspidata brevifolia*) at wholesale and retail. The hardiest and most handsome of the Yew family. Stock all grown in New England.

JAPAN MAPLE, ACER POLYMORPHUM and other types, grown from New England Seed. The best stock for general planting.

Try a small order of each for spring shipment!

JAS. H. BOWDITCH

9-3 Tremont Bld., - - - Boston, Mass.

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

Notice to the Trade

Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

H. DEN OUDEN & SON

The Old Farm Nurseries BOSKOOP, HOLLAND

PEONIES

ONLY BY THE WHOLESALE

Let me send my list of OVER ONE HUNDRED Best Varieties

J. F. ROSENFELD, West Point, Neb.

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor
(Successor to Blair & Kaufman)

Reliance Building, Kansas City, Mo.

Offer for SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

Catalogues Received

Wild Bros. Nursery Co., Sarcxie, Mo., Autumn, 1910, catalogue of fruit trees, ornamentals, small fruits, etc. Illustrated. The cover shows a clump of spirea Van Houttei.

The Munson Nurseries, Denison, Texas. Catalogue of fruits, trees, vines, roses, etc. Grapes a specialty.

Hunts ille Wholesale Nurseries, Huntsville, Ala. Trade price list, October, 1910.

James Smith, Scotland Nurseries, Tansley near Matlock, Derbyshire, Scotland. Trade list.

Hurst & Son, Burbage Nurseries, near Henckley, Leicestershire, England. Special offer to the trade of hardy shrubs and plants.

Texas Nursery Co., Sherman, Texas, are issuing a handy little book, entitled DOLLARS IN NUTS, which contains a symposium of Nut Culture in the Southwest.

H. J. Weber & Sons, Nursery Co., Nursery, Mo. General Catalogue and Price List of Trees, Shrubs, Vines, Roses, Evergreens, perennials etc., for Fall, 1910, and Spring, 1911.

Franklin Davis Nursery Co., Inc., Baltimore, Md. Wholesale Price List for Fall, 1910, and Spring, 1911.

Buyl Bros., Cherscamp, Belgium, General Catalogue.

Daniel A. Clarke, Red Oak Nurseries, Fiskeville, R. I. "Clarke's Hardy Flowers." This is a neat little booklet, with a number of good illustrations.

Leesley Brothers Nurseries, Chicago, Ill. Wholesale Catalogue.

Peninsula Nurseries and Bulb Gardens, D. W. Babcock, Berlin, Md. Trade Bargain list of choice Forest and Fruit tree seedlings, and Seed, perennial plants, etc.

Tennessee Wholesale Nurseries, Winchester, Tenn. Wholesale Price list.

J. H. Skinner & Co., Topeka, Kans. Wholesale price list.

Hiram T. Jones, Elizabeth, N. J., Union Co. Nurseries, Wholesale list.

The Wm. H. Moon Company, Glenwood Nurseries, Morrisville, Pa. Circular of hardy trees and plants and perennials for the beautification of the home place.

F. W. Kelsey Nursery Co., 150 Broadway, New York City. Circular of suggestions in regard to trees, shrubs, and hardy plants, with special prices. Autumn, 1910.

John Hill & Sons, Spot Acre Nurseries, Stone, Staffs, England. Special cheap net offer of conifer pot shrubs, to the trade, September, 1910.

Barbier & Co., 16, Route D'Olivet, Orleans, France. Nursery trade list for autumn, 1910, and spring, 1911, of fruit tree stocks, young conifers, ornamental trees and shrubs, perennials, etc.

Thomas Meehan & Sons, Germantown, Phila., Pa. Circular of tree, shrub and fruit seeds, autumn, 1910, and spring, 1911.

Leedle Floral Co., Springfield, Ohio. "First Aid to Rose Buyers." 1910-1911.

Forest Nursery & Seed Company, J. H. H. Boyd, Proprietor, McMinnville, Tenn. Wholesale trade list for Fall, 1910.

Ellwanger & Barry, Mount Hope Nurseries, Rochester, N. Y. Wholesale price list for Fall, 1910.

Frans Van Der Bom, Oudenbosch, Holland, Wholesale catalogue.

Vincennes Nurseries, W. C. Reed, Vincennes, Ind. Semi-Annual Wholesale trade list.

We are in receipt of the following very attractive nursery catalogues, prepared and printed by J. Horace McFarland Co., of Harrisburg, Pa.

Glen St. Mary Nurseries, Glen St. Mary, Fla. Catalogue of citrus fruits, nuts, ornamentals, shade trees, etc. Size nearly square. Very pretty cover, showing oranges and their foliage in colors. Contains a great number of illustrations, which are very clear, owing to the fact that good quality enamel paper is used.

P. J. Berckmans Co., Augusta, Ga. Catalogue of fruit trees, ornamentals, evergreens, climbers, etc. Regular catalogue size. Cover simple, though effective, with a color scheme in green and white, showing colonial house, with a white crape myrtle tree in full bloom.

THE SIMPLEX TREE BALER

BALES IN 19 STATES

PRICE, \$16.00

I offer a full line of Nursery Stock, Fruit and Shade Trees, Ornamental Trees, Shrubs, Roses, Peonies and Gladiolus, etc. Send for catalog.

L. F. DINTELMANN

Box 227

Belleville, Illinois

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel

INDIANA HARBOR, IND.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

National Florists' Board of Trade, 56 Pine St., New York.

Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES; TWO YEAR CALIFORNIA PRIVET, CAROLINA POPLARS, and CATALPA SPECIOSA.

WE INVITE YOUR INSPECTION.

Easterly Nursery Co., CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS

Extra size, 6 to 7 ft.; inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

The Elizabeth Nursery Co., Elizabeth, N. J. Fall 1910 wholesale trade list.

C. M. Hobbs & Sons, Bridgeport, Ind. Semi-annual wholesale price list.

Victor Detriche & Co., Angers, France. Wholesale catalogue of plants.

T. S. Hubbard Company, Fredonia, N. Y. Grape vine specialists. Wholesale price list for autumn 1910.

Peter Henderson & Co., New York. Catalogue of wheat, grasses, etc.

The Grangers Nurseries, Seabrook, N. H. Surplus list for fall delivery.

Youngers & Co., Geneva, Nebr. Bulletin No. 1, Fall 1910.

New Haven Nurseries, New Haven, Mo. Semi-annual wholesale price list.

Knox Nurseries, Vincennes, Ind. Wholesale price list—cherry and apple.

The Huntsville Wholesale Nurseries, Huntsville, Ala. September Bulletin.

F. H. Stannard & Co., Ottawa, Kans. Wholesale trade list.

W. N. Scarff, New Carlisle, Ohio. Semi annual list of choice new and standard bush fruits.

Sebire Cauvet, Mesnil Esnard, près Rouen, France. 1910, 1911 Catalogue of plants, fruit trees, forest trees, ornamentals, roses, etc.

The Bay State Nursery Co. has begun work on its new packing house. The building is 60x132, two stories high, and will cost \$7,000.

Westminster Nursery, J. E. Stoner, prop., Westminster, Md. General nursery stock.

Osterman & Sons, Hamburg, Germany and 29 Broadway, New York. Wholesale catalogue of forest and ornamental trees, deciduous and evergreen.

SMALL SIZED NATURAL NORTH CAROLINA PEACH PITS ARE OFFERED IN QUANTITY BY THE MORRISON PRODUCE AND PROVISION COMPANY.

HOW DEEP SHOULD WE PLOW?

I am often asked: "How deep would you plow?" This, like everything else, depends. My experience on my soil is that the greatest proportional increase in crop production is from the seventh to the tenth inch. After that the increase for every additional inch plowed is not so great, for this reason: I have been recommending the small farmer to plow a minimum of ten inches, for this depth can easily be reached with three 1400-lb. horses and a good make of walking plow, and it would not always pay to keep a special team for working a few months in the year. For the farmer who makes a specialty of grain raising I have no doubt but that the system of George L. Farrel is about the best there is at present, namely, to plow deep and fallow for every crop and subsoil down to 15 or 16 inches every other year or so. The question of the amount of profit must always depend largely, of course, on local conditions, especially richness of soil, and also on the economic status of the farm in question.

E. R. PARSONS,
Dry Farming Congress.

DO YOU WANT A CARLOAD OF HEALTHY SMALL SIZED NORTH CAROLINA PEACH PITS? IF SO, CORRESPOND WITH THE MORRISON PRODUCE AND PROVISION COMPANY.

WANTED

A young or middle-aged man with a thorough knowledge of ornamental trees and shrubbery, and ability to tastefully design plantings of them. Must be able to prepare plans and intelligently answer correspondence about landscape matters as well as meet with and advise prospective buyers of this line. In reply, state experience, age, and give references of ability and character. Address X.Y.Z., care of this paper.

BLACK LOCUST

SEEDLINGS, all grades, in car load lot or less.

Also Apple Scions in quantity.

Please let us have your want lists and also your offers of transplanting and other stock.

Cunningham Nursery Co.

RISING SUN, IND.

FOR

PACKING MOSS

Inquire of

B. R. MITCHELL, Mather, Wis.

F. DELAUNAY, Angers, France

SPECIALTIES Fruit Tree Stocks as:

APPLE, ANGERS QUINCE,
MAZZARD CHERRY MAHALEB,
MYROBOLAN, PEARS

FOREST TREES, SEEDLING AND TRANSPLANTED:
EVERGREENS, ORNAMENTAL SHRUBS, MANETTI,
MULTIFLORE ROSES. *My General Catalogue will be sent free on application.*

Large Stock of

ELM SEEDLINGS

in all grades

CAN MAKE LOW PRICES NOW

Write us

PLUMFIELD NURSERIES

G. L. WELCH & CO., Proprietors
Fremont, Nebraska

Magnolia Grandiflora

We collect the small seedling "plants and seed" of this magnificent Southern evergreen tree from the forest. Guaranteed genuine.

R. H. MANLY

RIVERTON, LA.

Book Review

STORIES AT LESS THAN A CENT APIECE

In the fifty-two issues of a year's volume *The Youth's Companion* prints fully two hundred and fifty stories. The subscription price of the paper is but \$1.75, so that the stories cost less than a cent apiece, without reckoning in all the rest of the contents—anecdotes, humorous sketches, the doctor's weekly article, papers on popular topics by famous men and women.

Although the two hundred and fifty stories cost so little, they are not cheap stories. In variety of scene, diversity of incident, skill and truth in character-depicting, they cannot be excelled.

The Announcement for 1911, beautifully illustrated, giving more detailed particulars of these stories and other new features which greatly enlarge the paper, will be sent to any address free with sample copies of current issues.

Every new subscriber receives free The Companion's Art Calendar for 1911, lithographed in thirteen colors and gold, and if the subscription is received at once, all the issues for the remaining weeks of 1910.

THE YOUTH'S COMPANION,
144 Berkeley St., Boston, Mass.

New Subscriptions Received at this office.

The Elm City Nursery Co. have just let contracts for a large addition to their packing shed facilities and also storage cellars where Bay trees and other half hardy plants can be stored through the winter. They are also extending their office floor space and adding to their drafting room.

THE NURSERYMEN IN PEACH SECTIONS ARE NOW LOOKING FOR AN AVAILABLE AND DESIRABLE SUPPLY OF PEACH PITS. THEY ARE REFERRED TO THE MORRISON PRODUCE AND PROVISION COMPANY.

THIS CONCERN IS LOCATED SO THAT THEY CAN COMMAND THE MARKET IN THE PURCHASE OF NATURAL CAROLINA PEACH PITS.

CONRAD APPEL

The Darmstadt Seedsman

HAS participated at the "World's Fair, Brussels, 1910," this year, and has been "Beyond Competition." His beautiful show case, containing all his specialties, Natural Grass, Clover and Agricultural Seeds, Grass Seed Mixtures for Lawns and Meadows, Forest Tree Seeds and a fine collection of Conifer Cones attracted many visitors.

He could also be seen at the Industrial Exhibition, Allenstein (East Prussia), 1910, where he was awarded the highest prize, a

GRAND SILVER MEDAL, WITH DIPLOMA.

CLEMATIS PANICULATA

Fine 3 year
PAEONIES, leading

kinds. Great variety. Prices right.

F. A. BALLER, Bloomington, Ill.

PENNSYLVANIA NURSERY CO.

Girard, Erie Co., Pa.

GROWERS OF A COMPLETE GENERAL LINE.

SPECIALTIES: Peach, Cherry, Plum, Currants, Grapes, Hedging, Ornamentals, Shrubs—some extra large. Plum Farmer Raspberry. Send us your want and surplus lists.

WANTED Practical, experienced man who can take charge of growing nursery stock, understands propagation and can sell stock at retail on the road when not busy in the nursery. Good opening for a live man who can get business. State experience and salary wanted. Established firm with good business. Address Box A, care National Nurseryman

BERBERRY THUNBERGI, transplanted fine 1, 2 and 2½ ft.
LOMBARDY POPLAR, young vigorous trees, branched low, 8 to 10 feet and up to 18 feet.
CAROLINA POPLAR, 8 to 18 feet, same quality.
RASPBERRY PLANTS, in 100 or 1000 lots.
CALIFORNIA PRIVETS, one and two years. 1 ft., 2 to 3 and 4 ft. Fine, bushy. Also same sheared to globe shape, 4 to 5 ft.

JOSIAH A. ROBERTS
MALVERN, PA.



FRITSCH & BECKER
Seedmerchants
GROSS-TABARZ GERMANY.
SPECIALISTS IN
Forest Tree Seeds & Fruit Tree Seeds.
Offers on application.

80,000 PEACH TREES For Fall Delivery

Also full line of nursery stock, including Red Oak, Berberis, Thunbergi, White, Austrian and Scotch Pine, Norway Spruce, Grapes, Currants, etc.

M. T. TWOMEY, - Franklin, Mass.

Sycamores, Willows, Cottonwood and Cypress Trees by the Million. Golden Acacia Trees by the Thousand.

T. L. GRIMES

ECHO,

RAPIDES PARISH,

LOUISIANA

California Privet PLANTS AND CUTTINGS
BY THE MILLION

Write us for Prices

Oak Lawn Nursery Co.
HUNTSVILLE, ALA.

We grow in large quantities and offer surplus at greatly reduced prices:

2-yr. old fieldgrown H. P. Roses: Baby Rambler; Dorothy Perkins; Crimson Ramblers; Tausendbeauty; New Blue Rambler, etc., etc. Rhododendrons; Hardy Azaleas; Clematis; Tree-Hydrangeas; Magnolias; Fancy Conifers; Blue Spruce; Peonies; Shrubs; Ornamental Trees; Seedlings, etc.

KALLEN & LUNNEMANN, Boskoop, Holland

WILLIS NURSERIES

A. WILLIS & CO., Proprietors

OTTAWA, - - KANSAS

Offers for the Fall of 1910 and Spring of 1911 a general assortment of choice nursery stock including fruit trees, small fruits, ornamental trees and shrubs, roses, evergreens, forest seedlings, apple seedlings and peach seeds.

Waxahachie Nursery Company

J. R. MAYHEW, President

Offers the trade a **Fine Block** of 2-year old apple, standard sorts.

CHERRY, 1 and 2-year, all grades. **Special Prices** on car load of Cherry.

PEACH, 1-year and June buds. Surplus largely in heavy grades.

APRICOT and **PLUM**, a small surplus in heavy grades.

CALIFORNIA PRIVET, 30,000 1 to 2 ft.; 50,000 2 to 3 ft.; 40,000 3 to 4 ft.

CATALPA and **BLACK LOCUST** Seedlings all grades.

EVERGREENS, ROSES, SHADE TREES, ETC.
GRAPE, BLACKBERRY, DEWBERRY

OUR SURPLUS IS FOR SALE. LET US QUOTE YOU

Waxahachie Nursery Company

WAXAHACHIE, TEXAS.

Cyclopedia of American Horticulture

L. H. BAILEY

IN FOUR VOLUMES

The NATIONAL NURSERYSMAN has made special arrangements with the publishers of this great work and now offers it to Nurserymen on *special easy monthly terms*, \$2.00 per month for ten months. The work shipped by express prepaid on receipt of first installment and coupon below filled out.

Practical instructions on every subject connected with Horticulture. Four handsome quarto volumes; 2,800 original engravings, 50 full plates; 2,016 pages and 4,357 articles; Total plants accounted for 24,434.

Fill out this coupon and mail with first payment:

SPECIAL ORDER BLANK.

National Nurseryman,
Rochester, N. Y.

Date.....

Please enter my name as a subscriber for the new *CYCLOPEDIA OF AMERICAN HORTICULTURE* to be sent to me, charges prepaid, complete in four illustrated volumes, bound in green cloth. I inclose \$2 and agree to pay \$2 monthly for nine months after delivery until \$20 is paid.

Signature.....

Address.....

Town.....State.....

Reference.....

NOTE.—Send Money by Check or Post Office Money Order.

THE NATIONAL NURSERYSMAN

218 Livingston Building

Rochester, N. Y.

FRUIT TREES

(ENGLISH GROWN)

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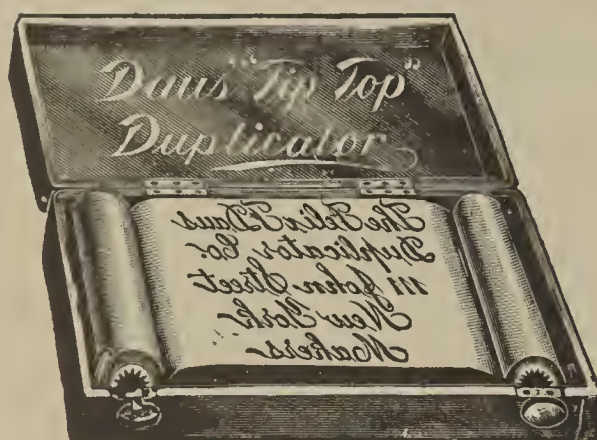
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(SHRUBS)

500 M California Privet	Weigelias
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100,000 Cherry, two year, 5 to 6 feet, 3-4 up, fine; 4 to 5 feet, 5-8 to 3-4, fine.

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The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XVIII

ROCHESTER, N. Y., DECEMBER, 1910

No. 12

NORTHERN NUT GROWERS' ASSOCIATION

To Promote Cultivation of Indigenous and Adapted Varieties of Edible Nuts

A new member was admitted on November 17, in New York City to the list of organizations which have for their purpose the promotion of horticultural interests in this country. For some time past, a union of individuals interested in nut growing has been urged. Prominent among persons who have promoted the movement are Dr. W. C. Deming, of Westchester, N. Y., and Dr. Robert T. Morris, the eminent surgeon of New York City, and enthusiastic nut grower of Connecticut. A call was issued for a meeting at the New York Botanic Garden, kindly placed at the disposal of these gentlemen by Dr. N. L. Britton, for November 17, and a small, but enthusiastic meeting was held.

Dr. Deming acted as chairman and presented the objects of the meeting, supporting his statements by a number of letters from persons connected with some phase of the nut-growing industry, proffering advice and assistance. The suggestions coming from these widely separated sources demonstrated the need of such a society, together with the scope and range of its function. Enough problems bearing upon the adaptation, the improvement, the culture, and the handling of the product were suggested in these letters to occupy the conference very profitably for several days.

The first business of the meeting was to consider organization, and a committee was appointed to take this matter in hand. After informal consideration, the committee presented the following report on organization, which was adopted tentatively by the meeting.

NAME.—The society shall be known as the Northern Nut Growers' Association.

OBJECT.—The promotion of interest in nut-producing plants, their products, and their culture.

MEMBERSHIP.—Membership in the society shall be open to all persons who desire to further nut culture, without reference to place of residence or nationality.

OFFICERS.—There shall be a president, a vice-president, a secretary-treasurer, and an executive committee of five persons, of which latter the president and secretary shall be members.

MEETINGS.—The association shall hold an annual meeting on or about November 15, and such other special meetings as may seem desirable, these to be called by the president and executive committee.

FEES.—The fees shall be of two kinds, annual and life. The former shall be \$2.00, the latter \$20.00.

The above brief draft of working rules were adopted by the society, with the understanding that the executive committee should consider the question of constitution and by-laws, and present such modifications as seemed desirable at the next regular meeting of the association.

PAPERS.—In addition to a large number of letters from nut growers, North, South, East, and West, several papers of present-

day interest were presented. Among these was one from Prof. W. N. Hutt, State Horticulturist of North Carolina, on nut growing in that state; another from Henry Hicks, of Westbury, Long Island, containing a number of practical and pointed remarks and suggestions, which, taken together, clearly defined the probable field and scope of the society's work. An interesting communication was also received from Mr. W. N. Roper, former editor of the *American Fruit and Nut Journal*, of Petersburg, Va., bearing on nut growing in that vicinity.



Dr. Robert T. Morris,
President Northern Nut Growers' Association.

Some discussion took place, relative to form of organization, as to whether the association should organize independently, or in affiliation with the National Nut



Dr. W. C. Deming, Secretary and Treasurer.

Growers' Association. It was thought best to organize independently for the present, and the question of affiliation could be taken up later on.

OFFICERS.—After the report of the committee on constitution and by-laws was presented and accepted, those desiring to qualify for voting privilege were given the opportunity of paying their fees, after which the election of officers took place. This resulted as follows: President, Dr. Robert T. Morris, New York City; vice-president, T. P. Littlepage, Washington, D. C.; secretary-treasurer, Dr. W. C. Deming, Westchester, N. Y.; executive committee, John Craig, Cornell University, Ithaca, N. Y., Henry Hales, Ridgewood, N. J., C. P. Close, College Station, Md.

EXHIBITS.—The exhibits were varied and instructive. Secretary Deming presented a display of nut literature, including reports, bulletins, and special publications on nuts and nut culture.

Henry Hales, Ridgewood, N. J. Samples of Hale's paper-shell hickory, samples of *Juglans regia*, grown in his vicinity.

Mrs. Jos. T. Lovett, Ameleia. Exceptionally fine specimens of Paragon chestnut, specimens *Juglans regia*.

L. C. Hall, Avonia, Pa. Specimens *Juglans regia* very large, shell marked with rough convolutions; specimens Anderson walnut, Greenwich, Conn.

Elton B. Holden, Hilton, N. Y. Specimens *Juglans regia* from tree 45 years of age. Good appearance, medium quality.

W. E. Howard & Son, Holley, N. Y. Three varieties *Juglans regia*.

T. P. Littlepage, Washington, D. C. Collection of nuts from his farm in Boonville, Ind., as follows: One lot large shellbark; one lot medium size shagbark; two lots hybrid *Hicoria*, one with exceptionally thin shell; six varieties Indiana pecans from his farm at Boonville; one variety from Warwick Co., Ind.; one from Henderson Co.; one

from Perry Co. These varieties nearly all showed unusual merit in regard to quality of meat and thinness of shell. This Indiana collection of hardy varieties was especially interesting, indicating the possibility of northern pecan culture.

Simpson Bros., Vincennes, Ind. Pecan trees illustrating whip and cleft graft and budding method.

Mr. Sober, Pa. Specimens of Sober Paragon nuts and sample tree.

J. F. Jones, Jeanerette, La. Specimen budding tool.

J. W. Kerr, Denton, Md. The veteran eastern shore fruit grower sent a collection of filberts grown in his orchard.

Standard Pecan Co., Bloomington, Ill. Collection of pecans.

In addition to the above, there were interesting specimens of black walnuts, butternuts, and chestnuts, grown in gardens in New York City.

The following resolution was unanimously adopted by the Northern Nut Growers' Association:

Resolved that the Northern Nut Growers' Association express its appreciation of the attitude of the National Nut Growers' Association in encouraging the organization of associations which have for their purpose the development of the nut industry, and we hereby pledge our support to, and our cooperation with said National Nut Growers' Association. And be it further

Resolved, that we hereby acknowledge our great obligation to the many pioneer nut growers of the South who have done so much to put our nut culture on a scientific basis and that we express to them our deep gratitude for the fund of valuable information and data which they have worked out and made available.



Stock grafting the Pecan. A good union between stock and cion.

NATIONAL NUT GROWERS' ASSOCIATION.

Report by Ex-President J. B. WIGHT.

The ninth Annual Convention of the National Nut Growers' Association met in Monticello, Fla., November 1-3, 1910. As a whole, the convention both in attendance

(Continued on page 837)

Prosper Julius A. Berckmans

One of the most commanding figures in the field of practical and scientific horticulture has been removed. Prosper Julius A. Berckmans of Augusta, Ga., died on November seventh. Less than a month ago, the editor of this journal corresponded with this veteran pomologist in making arrangements for the forthcoming meeting of the

Berckmans, has resided during his long and active career. Dr. Berckmans, the elder, in addition to his love and knowledge of horticulture, was a plant artist of note. His water-colored fruit plates are today models of accuracy, expressing high artistic quality. It is not surprising then, that, with this training, the love for fruit growing possessed



Prosper Julius A. Berckmans in his office at Fruitlands.
(Photograph by National Nurseryman.)

American Pomological Society at Tampa, Florida, and the co-incident meeting of the Georgia Horticultural Society, of which Mr. Berckmans has been president for many years, at Thomasville, Georgia. At that time, he was full of plans and warmly enthusiastic over the outlook for the forthcoming meetings. This was characteristic of his life work. Whenever horticultural matters were at stake, he devoted himself unselfishly and vigorously to their promotion.

Mr. Berckmans was a descendant of a noted Belgian family of horticulturists. His father, Dr. Louis Berckmans, was associated with the famous Belgian scientist, Van Mons, noted the world over for his monumental work in improving the pear. The father of the subject of this sketch came to this country about the middle of the last century, and after considering a home in the North and South, living first in Plainfield, N. J., he settled near Augusta, Georgia, in 1857, where his son, Prosper J. A.

by the recently deceased should have become a second nature in early manhood.

P. J. A. Berckmans, the well known head of the Fruitland Nurseries, which were established on the outskirts of Augusta in 1857, died at his home on the estate, which he loved so well, on November 8, 1910, and was buried on November 9th. Early in life, he became associated with the horticultural development in all parts of the country. His work became very much diversified, and his importations laid tribute upon the entire field of ornamental plants, both herbaceous and ligneous, in addition to the large groups of fruits adapted to tropical and sub-tropical conditions. Among the plant and fruit introductions with which his name should be connected, are Thurber and Picketts late peach; golden arborvitae, *Biota aurea nana*, and the pyramidal form of this type. He was also instrumental in disseminating *Citrus trifoliata*, which has now taken such an important part in the spread of orange culture. The

Berckmans Company also introduced the Peen-to peach, one of the most satisfactory forms for cultivation in the South. The popularizing of the sand pear tribe and its hybrids; of the kumquat, the Japanese persimmons, and some of the Japanese plums, has been a part of the life work of Mr. Berckmans and his successors.

For many years, P. J. A. Berckmans occupied the position of chief executive of the American Pomological Society, to which he succeeded on the retirement of its first president, Marshall P. Wilder, of which further mention is made by his co-workers.

He was fortunate in being able to interest his three sons in his own life work, and the Fruitland Nurseries are now being continued by Louis A., Robert C., and P. J. A. Berckmans, Jr. The firm was incorporated with these members in 1898. Mr. Berckmans will be remembered as a courteous and cultured gentleman; a man of science, a successful man of affairs, the co-worker of a generation of horticulturists now passed away, of which the Downings, Warder, Thomas, Marshall P. Wilder, and Patrick Barry, were members, and one who had an important part in acting as a connecting link between the horticulture of the new and the old world. His place cannot be filled, but his business will be prosecuted vigorously and intelligently by his three sons.

TRIBUTES BY HIS CO-WORKERS

WM. C. BARRY, Rochester, N. Y.

Mr. Berckmans and his friends

—Downing, Thomas, Wilder, Hovey, Barry, Elliott and Warder rendered a great service to the whole country in the careful testing of a variety of fruits and in the publication of the American Pomological Society's catalogue. It is greatly to be regretted that so many choice fruits once cultivated are no longer grown and that the majority of gardens are deficient in the variety that is necessary for a succession for the family table.

I am hoping that in the near future new interest will be taken in this subject of a fruit supply for the family and that the fruits of high quality may receive attention once more. We need men of Mr. Berckmans' type for this work.

WM. C. STRONG, Waban, Mass.

"It was in 1848 that I first heard the clarion call of Mr. Wilder to become a member of the National Pomological Society. At that early date, it was natural that, under the lead of such men as Wilder, Walker and Hovey in Boston, Downing, Parsons, Barry and others in New York, undue consideration was given to northern and eastern interests. But this new organization at once revealed the host of kindred spirits from all parts of the land, who were

devoted to the advancement of pomology. It is not invidious to say that Prosper J. Berckmans stands foremost, as a representative from his section of our country. From the beginning of the Society he took an active interest in its work, and was recognized as a wise and able authority and judge of fruits. How vividly do I recall his clear, liquid eye, his alert and hearty manner, as he conducted his work in committee, or in debate! The bond of fellowship in those early days, between the northern and southern members of the Society was strong and remained unbroken during the years of political strife. Mr. Berckmans has been spared for many years of usefulness, which were crowned with success to the end. We cherish his memory, we honor and are stimulated by his example. Generous and magnetic soul, we were glad for your companionship in earthly labors; may we have renewed acquaintance in the life eternal!"

COL. G. B. BRACKETT, United States
Pomologist



A hedge of *Citrus trifoliata* at Fruitlands, Georgia.
Mr. Berckmans was instrumental in popularizing
this useful plant.

The passing of Prosper J. Berckmans removes one of the foremost figures from American horticulture. For more than fifty years he has been before the public as a nurseryman and a fruitgrower. For more than fifty years his name has been a household word to orchardists in the South. He was a pioneer in orchard work there and he backed his statements by sound judgment and good, hard, honest work. He helped to lift the peach industry from its initial beginnings to first place in the commerce of

Georgia. And the Georgia peach, like the Georgia watermelon, made the state famous in horticultural history.

He established "Fruitlands," a magnificent floral park, overlooking the city of Augusta. He found much of northern Georgia a wilderness; he left it a place of pomological beauty.

"Fruitlands" is numbered among the most picturesque and hospitable homes in America. A beautiful background for the picture of the honest, fine old horticulturist. His home was the center of warm hearted hospitality, the Mecca towards which prospective fruitgrowers continually drifted; and no visitor was ever turned from his door step empty handed. He lived, talked, preached and practiced landscape art, pomology, forestry and floriculture. He was the acknowledged expert on evergreens in the South. He was as unostentatious in his social life as he was scientific in his chosen calling. As a pomologist he had few equals, and I am glad that a page in the NATIONAL NURSERYMAN is dedicated to testimonials of the worth of President Berckmans.

I like to think of him as *President* Berckmans. He occupied that position in the American Pomological Society for so many years. And he was president of the Georgia Horticultural Society for more than 33 years, a

tribute I think that has not been paid by any other State Horticultural Society to its presiding officers. He was the most cordial, genial, gracious presiding officer it has ever been my good fortune to meet.

He was my friend. Please pardon the personal allusion. For more than fifty years no other man has been nearer to me nor rendered more valiant horticultural aid. As pioneer pomologists (with a coterie that has followed the guidon into the Great Beyond) we together saw the wilderness grow into a country of happy homes, growing cities, prosperous farms and orchards, all bound together by an intricate network of railroads. We knew Cincinnati as a hamlet, when the present aristocratic Walnut Hills were covered with the first cultivated vineyards in the state of Ohio. We saw the red men depart from their tribal lands in our respective states of Georgia and Iowa and the forests give place to farms and fruit trees.

The problems of pomology west of the Mississippi were identical with those in the new and untilled lands of northern Georgia. We compared notes; we counselled together. We brought the first fruits of our new orchards to the American Pomological Society. We discussed their relative merits and the possible advantage they would be to coming generations of fruitgrowers. The prolific richness of the present day horticultural press had not reached us then. President Berckmans was a sage counsellor, a trusty friend, a safe and sane horticulturist. Many of the pomological successes he then alone dared to predict we have lived to see safely come to fruition.

He had the sanest judgment on promising new fruits of almost any man that I ever knew; and Messrs. Meehan, Saunders and other noted plant introducers and propagators of that day looked to him for advice and counsel and made "Fruitlands" an experiment station. And out of Fruitlands have come some of the most successful "finds" in the whole arena of plant industry. I wish the gifted pen of the illustrious Berckmans might have put them all on record.

He successfully passed his eightieth milestone a few weeks ago and wrote to me cheerfully concerning it. He was full of zealous enthusiasm for the forthcoming meeting of his beloved Georgia State Horticultural Society which is to take place in January next, and he asked me to contribute to the program of the 34th annual meeting over which he had presided—but alas!—A telegram at five o'clock on the morning of the eighth of November announced the passing of President Berckmans into the Great Beyond. I can say no more. Words fail me. Let us drop on his bier, with the palm and the laurel, that fadeless flower "Forget-me-not"!

FROM AUGUSTA, GA., CHRONICLE

It is only when Death summons one of the truly distinguished, honored and beloved members of a community that even his neighbors can realize the fullness of the loss; for, however much we may have recognized his deeds in life or appreciated the force of his character and scope of his influence, it is only when we come to understand that he has been forever taken from us, that we fully comprehend

his true value. And it is dealing in no superficial praise to say that this was never more true than in the death of Dr. Berckmans; for, look where we will, there is no one to take his place amongst us.

But, while it is true that Dr. Berckmans held a peculiar place in the esteem and affection of Augusta people, and has long played an important part in the life of this city and section, it cannot be said that he belonged to us alone, or that the sorrow and loss caused by his death will be confined to this community; for not only was he a distinguished citizen of Augusta, but an honored and esteemed spirit of the world—a man whose name and works have received the highest recognition and distinction, and to whom, almost every day brought some fresh evidence, some new expression to emphasize how widely and how well his works and character were appreciated.

Note and Comment

HALE'S IDEA OF PEACHES AS FILLERS IN APPLE ORCHARD

Hale, the Georgia peach king and Connecticut apple and peach grower, speaking of combining apples and peaches in one orchard says:

"It will take ten years for the apples to bear, but they will keep on bearing for a century, while the peach tree life is only ten or fifteen years, so I call the peach trees my common stock, but the apples are the gold bonds. When it comes time to clip bond coupons we'll retire the common stock."

POTASSIUM CYANIDE FUMIGATION

A very effective agent for the destruction of scale and the white fly in citrus orchards is hydrocyanic acid. It requires either twice the length of time to get satisfactory results with the scale that it does with the fly, or else the use of twice the amount of cyanide. For the white fly a satisfactory amount of potassium cyanide is three-fifths of an ounce for every 100 feet of space to be filled with the gas. Dilute an ounce of sulphuric acid in one and one-half ounces of water, and drop in the potassium cyanide while this mixture is developing great heat. By using this method, instead of allowing the solution to cool first, a much larger amount of gas is liberated, thus increasing the effectiveness of the cyanide and decreasing its cost proportionately.

NEW YORK FLOWER MARKET

The movement being promoted by the New York Florists' Club, The Growers' Cut Flower Company, Cut Flower Exchange, and other floral associations in New York City, for the establishment of a flower and plant market, is making progress. A committee of the New York Florists' Club has had this matter in hand for some time, and has reached the point where plans are being considered. The prospects for the establishment of the new market are bright. The plan is to place this market at the foot of the Pennsylvania bridge.

WHAT THE EAST CAN LEARN FROM THE WEST IN FRUIT GROWING

The orcharding of the oldest of the leading fruit growing areas of the Northwest Pacific is little more than a quarter of a century old, yet in that time very important innovations have been introduced. Many of these can be profitably copied by the fruit growing fraternity of the East. The natural conditions are conducive to the production of a handsome product. Bright sunshine and clear air discourage fungous diseases and encourage the development of high color and handsome finish. In the irrigated regions, the character and amount of growth of tree and fruit may to a certain extent be controlled. Aside from these natural conditions, the men and their practice are the important influencing factors. To offset this is the long haul to the world's great markets.

1. THE FRUIT GROWERS.—They are possessed of great faith in the future of the country; they have unbounded optimism; they realize the necessity of advertising, and more than all they appreciate the advantages of cooperation. In their case necessity has driven the lesson home and experience has fixed it. The carefully-worked-out systems of cooperative marketing in vogue in the apple and citrus belts of the Pacific are especially worthy of study and emulation.

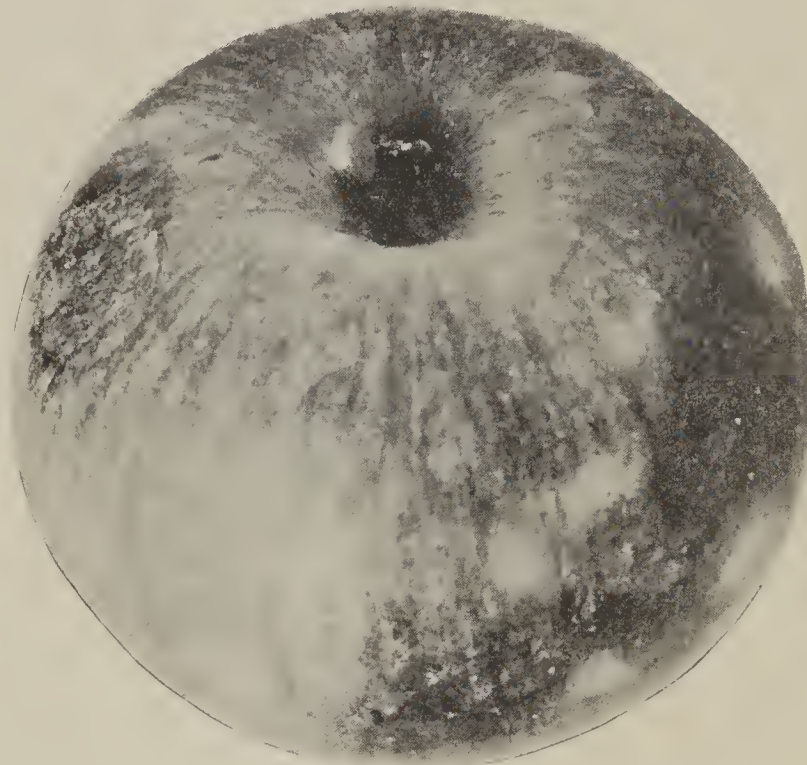
2. ORCHARD PRACTICE.—Tillage is thorough, not desultory and spasmodic. The need of conserving soil moisture has emphasized the value of tillage in utilizing the natural supply and its influence on liberating plant food. Orchards are tilled as a matter of course, not as an occasional practice. Spraying is practiced because the Pacific slope grower cannot afford to produce culls. These cannot be shipped and the home market has little use for them. A first-class product is the only one he can use in his business. Spraying to prevent injury from insect pests and such fungous enemies as prevail is thorough and persistent. Trees may be sprayed three or five times or more if necessary. Packing—and here is where the great lesson of importance to growers in the East can be learned. The box package is universal. The style of package assists honest packing. The demands of the situation prohibit dishonesty. The grading under the eye of a disinterested party is uniform. This is what the consumer desires. He wants uniformity in the box or barrel of apples purchased. Nothing discourages consumption so much as imperfect

grading whether this merely exhibits lack of uniformity or consistent dishonesty.

The eastern packer has not grasped the situation. The use of the barrel aids the packer who is willing to misrepresent, and the personal manner of grading places an additional strain on the man of elastic conscience.

We of the East need more faith in the fruit-producing ability of our climate and soil. We should realize that the product of these conditions is a fruit of the highest quality. We should preach quality; we should advertise quality; and we should pack so that the quality of the grade is as high as the product itself.

Fruit growing is old in the East, but really up-to-date methods are to be learned from our brethren of the West. We have all the advantage of location, the soil and climate are provided, and let us hope that the men who are to inaugurate this newer and better system of fruit growing are in our midst, endowed with energy, optimism, and the business ability to properly exploit the latent fruit growing resources of New England.



McIntosh is thought by some people to be the finest in quality of all apples. It is also one of the handsomest. It reaches its highest development in sections north of the forty-second parallel of north latitude at ordinary elevations, but further south in the elevated sections.

NEW HORTICULTURAL BUILDING FOR WISCONSIN COLLEGE AND STATION

Construction of New Quarters Begun at University of Wisconsin

A modern horticultural building with pottinghouse and greenhouses is being constructed for the horticultural and plant pathology departments of the College of Agriculture of the University of Wisconsin at Madison. The entire new structure will cost about \$60,000 exclusive of equipment and will provide much needed additional facilities for instruction and research work in horticulture and plant pathology at the Badger Institution. One range of four greenhouses 100 feet long and 20 feet wide is completed and a pottinghouse adjoining this is about finished. These houses will provide more than twice the glass area in use at the present time.

The work of the horticultural department is developing rapidly under the direction of Prof. J. G. Moore, recently appointed in charge of the department. Associated with him are Mr. O. R. Butler, appointed this summer, who will devote his attention primarily to research work. Mr. J. G.

Milward devotes his time primarily to extension work conducting orchard and potato spraying demonstrations at many points in the state and extension experiments in potato growing. Mr. A. J. Rogers is assistant in instructional and experimental work in vegetable forcing, market gardening, orcharding, etc., and Mr. J. Johnson is assistant in tobacco investigation. With the new facilities provided by this building the increased demand in the department for instructional and research work will be met.

AN INTERESTING EXPERIENCE WITH CROWN-GALL OF THE APPLE

The following test was made to determine the ability of recognized authorities to distinguish between a callus growth on a grafted apple tree and root or crown gall.

Eighteen one-year-old apple trees that were condemned for Crown Gall by J. G. Clark of Fromberg, inspector, and a member of the Montana State Board of Horticulture, 9 that were condemned by M. L. Dean of Missoula, inspector at large for Montana, 13 trees that had passed inspection by Clark, and 61 that had been passed by Dean, were taken; a numbered label was attached to each tree and a record made showing whether the tree had passed inspection or had been condemned and by whom.

The whole lot was then thrown together and sent successively to the Montana Agricultural College at Bozeman, Jos. W. Wallisch, secretary of the State Board of Horticulture, Butte, and C. I. Gardner, inspector for the first District, Billings, with instructions to sort the trees for root or crown-gall by dividing them into two lots, viz: trees affected with gall and trees not affected, and return them without disturbing the labels attached to the several trees.

A careful record was made of each sorting and an examination of this record among the other things shows the following:

Each tree was inspected for gall by three authorities.

Total number of trees examined 101.

93 out of the 101 trees were found free from gall.

98 out of the 101 trees were found infected with gall.

Of 18 trees condemned by Clark, all but 5 were passed by Gardner.

Of 9 trees condemned by Dean, all but 3 were passed by Gardner.

Of 12 trees condemned by Gardner, all but 3 were passed by Dean.

Of 70 trees examined by Dean and Gardner, 18 were condemned by one or the other but only 3 were condemned by both—they agreed in 3 cases and disagreed in 15 cases.

Dean B. Swingle, Professor of Bacteriology, of the Montana Agricultural College divided the 101 trees into 3 lots as follows:

Showing positive symptoms of gall, 78.

Probably affected with gall, 19.

Showing no distinct symptoms, 4.

Of 21 trees found positively infected by Swingle, 6 were found free from gall by Clark.

Of 7 trees classed as probably affected by Swingle, 5 were found free from gall by Clark.

Of 56 trees found positively infected by Swingle, 9 were condemned and 47 passed by Dean.

12 trees found to be probably affected with gall by Swingle were all passed by Dean.

Of 78 trees classed as positively infected by Swingle, 62 were found free from gall by Gardner.

Of 19 trees found probably affected by Swingle, 18 were passed by Gardner.

31 trees were passed on by Clark, Gardner and Swingle of which number only 2 trees were found free from gall by all 3 authorities. On the other hand, only 5 trees were condemned by all 3.

Of the 70 trees examined by Dean, Gardner and Swingle, only 1 was found free from gall, and only 3 infected with gall, by all 3 authorities.

Joseph W. Wallisch kept the trees about a month reporting at various times as follows:

July 21st—"Trees still in office, will receive attention in next few days."

Aug. 1st—"Have made start on samples, soon as I get through will return them with comments."

Aug. 9th—"Have not forgotten samples, am still working on them."

Aug. 14th—"Find it difficult to separate clean from diseased stock. On second thought have deemed it best to send to M. L. Dean, inspector at large."

Under date of Aug. 16th, Professor Dean returned the trees with the statement. * * * "It is impossible for anyone to absolutely identify all of the stock that is infected with the Root Gall."

The same lot of trees was passed on for gall by Professor M. B. Waite of the Bureau of Plant Industry, Washington, D. C., with results differing as widely from those recorded above, as they differ from each other.

Billings, Montana,

D. J. TIGHE.

A. M. SMITH

The only surviving charter member of the Ontario Fruit Growers' Association, Mr. A. M. Smith, of St. Catharines, passed away on October 19th, only a few weeks after the celebration of his seventy-eighth birthday. Both in his business and in his private life, he was everywhere respected; and as a pioneer fruit grower, he was largely instrumental in establishing the apple industry in Ontario on a firm footing.

MARKET PRICES

The middle of November found the New York market well supplied with apples, but firm. Prices ranged as follows for choice fruit: King \$3 to \$5 per barrel; Jonathan, \$3.50 to \$5.50; Twenty Ounce Pippin, \$2.50 to \$4.00; Baldwin, \$2 to \$4; Greening, \$3 to \$5.50; Snow \$2 to \$4.50; Ben Davis, \$2.25 to \$3.50.

At New York, pears were steady, and selling at the following prices: Bartlett, \$1.25 to \$1.50 per bushel; Bosc \$3 to \$5.50 per barrel; Seckel \$4.50 to \$6; Anjou \$3 to \$5; Sheldon \$2.50 to \$5; Kieffer, \$1.75 to \$3.50.

Grapes were becoming less plentiful, and Niagaras sold from 60 to 65 cents per 20-lb. basket, and Catawbas 12 to 13 cents per 4-lb. basket.

EDITORIAL WANDERINGS

Conditions in Western Quebec

A favorite saying of a venerable friend of mine is that "If our foresight were as good as our backsight, we would achieve greater success in life." Certain it is that we would avoid many perplexing problems and serious mistakes; but after all, the speculative factor which adds zest to life would be so completely eliminated that the ordinary individual would travel on a monotonous level of positivism.

Reflections of this type came to my mind recently in revisiting the scenes of earlier days, situated at the foot of the west slope of Yamaska Mountain in the Great Valley of the St. Lawrence River, some thirty miles southeast of Montreal. In this old-fashioned, yet, in many respects, up-to-date English-speaking community, composed of descendants of U. E. loyalists, we have a district unique in many respects. It was years after the fertile levels (bottom lands, they would be called in the West) of the St. Lawrence Valley were settled by French pioneers, that the migrating United Empire Loyalists drifted into Quebec and took up the remaining and rougher lands lying along the timbered and gravelly slopes of these hilly or mountainous outcroppings in the great plain of the St. Lawrence.

It is a common observation that wherever New Englanders travelled, wheresoever they went, they brought with them their native gardening proclivities. They came by these instincts very naturally, for in no nation in the civilized world is the love of gardening so deeply entrenched as in the English-speaking people. So we find the Puritan bringing with him to the new England his love for fruits and flowers, and his desire to embellish his home with these tokens of culture. Thus, it came about that in the region of Yamaska, as well as Rougemont and Beloeil Mountains, partly in response to soil and climatic adaptations, and partly in response to the personal equation, orchards and gardens were planted, and these regions became noted as fruit-growing sections at a comparatively early period.

Apples were an important product of the farmers of Abbotsford half a century ago, and the output steadily increased during the seventies and eighties under the enthusiastic guidance and stimulating example of the late Charles Gibb and his associates of the Abbotsford Fruit Growers' Association. It is proper to record that this small local association contributed an important quota to the collection of fruits sent for the Province of Quebec by the Montreal Horticultural Society to the Centennial Exposition in Philadelphia in 1876. I am reminded that my earliest lessons in the field of systematic pomology were taken in assembling and packing for shipment this important collection of apples, which were later exhibited at Philadelphia by Charles Gibb and associates of the Montreal Horticultural Society. This local association has been the agent for the dissemination of accurate information on practical questions related to orcharding and the selection of varieties. It has also been the means of holding the

annual fruit show at Abbotsford, which for many years was an autumn event of more than ordinary economic and social importance. It was the event of the season, and one looked forward to with a great deal of pleasant anticipation by the young people, for it combined features which appealed to the young as well as the old. The lengthy tables in the hall, well laden with fruits, were not more attractive to the elders than the field athletic events occurring in the afternoon to the juniors. The competition in the various classes was usually keen. Considerable stress was laid upon variety collections. In this way, the amateur interests were stimulated, possibly to an exaggerated extent; but the purely commercial interests were not overlooked, and special prizes were offered for collections having commercial merit, as well as those exhibited for educational purposes. To indicate the range of variety exhibition, it is worth while stating that single exhibits sometimes contained as many as a hundred plates of distinct kinds. The fruit show was not confined exclusively to fresh fruits, but included jellies, canned goods, and conserves of various kinds.

THE OLD AND THE NEW.

The social problem in Abbotsford has not differed in kind from that which prevails in many regions. Possibly it has its own peculiarities and characteristics. The main difficulty, as the visitor, like myself, notes, who goes back after a series of years, is that men are wanted. There has been the usual drift from the farm, from the small community, to the city, or at any rate to some distant point; and the demand at the present time is for men with means to develop the opportunities lying more or less dormant at present. It is cheering to note some progress in this line. Here and there, where a family has, in the passage of time, disappeared, new blood has taken its place, and under the later régime with the introduction of modern methods, progress belonging strictly to the present era is being made. Where a farm once prosperous and productive has lapsed into a state of quietude by the advanced years of the owner, by the removal by death, or the call of the industries, the condition approaches the pathetic; but where such a place has fallen into the hands of a young, energetic individual, possessing a knowledge of modern methods and imbued with the possibilities of modern agriculture, a picture of an entirely different type is set before the vision.

INFLUENCE OF SPECIALIZATION.

Localities, as well as individuals, drop into ruts and routine. What has been, is likely to prevail for a good while, if no infusion of new blood and new ideas from the outside takes place, so that it frequently happens that little change in the program of a place occurs until new methods are introduced by incoming settlers. Orchardng, mainly

apple-growing, has been the staple industry of Abbotsford for half a century; but while this is the case, the type of orcharding which prevails is not that which can be generally commended. Apples of the Fameuse type grow abundantly and of excellent quality and handsome appearance; but in accordance with the law governing natural produce, whenever a given variety is grown in large quantity, enemies of that variety are likely to arise, there have arisen in Abbotsford serious troubles affecting apple production. Those who have exerted themselves to counteract these difficulties are succeeding, while those who are accepting the conditions which Providence sends are not highly successful.

A very superficial examination shows that a radical reformation is needed in the method of handling the orchards. Many of the trees have grown to a state and condition demanding more room. In other words, orchards need thinning, and this demand is not peculiar to Abbotsford, but to most of the apple-growing sections of the St. Lawrence Valley. We were glad to note that in the newer plantings the trees were being set out at more generous distances. The original settings were often as close as 24 feet, which means that the trees will begin to crowd in less than as many years. The thinning of the trees is the crying need of many of the orchards in the locality at the present moment.

NEW ENTERPRISE.

I referred casually above to the introduction of new forms of horticultural enterprise. I was specially interested in the operations of the Byers Brothers, who have somewhat recently purchased one of the old estates, and are rapidly transforming it into a productive farm. These gentlemen are extending their apple plantings, but are at the same time caring for their established trees. They are branching out also in the field of market gardening, which, in consideration of the proximity of Abbotsford to Montreal, and the excellent markets and reasonable transportation facilities, should afford a desirable opening. In the line of market gardening, asparagus is one of the crops which has already been established. These men have given a successful demonstration of the possibility of potato culture on the Yamaska slope, by growing something over 1,000 bushels the present season, downing bugs and blight by the employment of suitable sprays. A carload of potatoes, which is probably the first complete carload of early potatoes ever produced by one grower, and shipped from Abbotsford, went out a short time since. Small fruits, strawberries and raspberries, are being planted, and these men expect in the near future to have a thoroughly established, well organized fruit and vegetable farm. They are students of theory as well as practice, and are bound to succeed. An example of this kind will be of large import to the community.

NOTED FARMS.

Among the places in Abbotsford which have tended to crystallize horticultural interest for the past quarter of a century or more, is Gibbland Farm. This farm is named

in honor of a former owner and enthusiastic horticulturist, the late Charles Gibb. It has recently been reoccupied by William Craig and family, who for five years past have resided in Maine in the interests of the education of the rising generation. Gibbland Farm is by all odds one of the most interesting horticulturally in the eastern townships section of the Province of Quebec. Charles Gibb was an experimenter and an ardent tree lover. He planted orchards commercially and experimentally, and, in addition, gathered in a large collection of ornamental and fruit-bearing trees, for the purpose of testing their values in the landscape, as well as their economic use. It was the irony of fate which removed him from the scene of his labor at a time when the works of his hands were approaching the most interesting period of their development.

SOUTHERN TREE TYPES.

Among the trees on the place at the present time which are rare in the Province of Quebec, and probably not to be found outside of the better gardens in the City of Montreal and Mount Royal Park, are varieties of the European linden, the European Norway maple, many of the rarer conifers, as blue spruce, Douglas fir, and Japanese cypress. One also finds well grown specimens of Kentucky coffee tree and American sweet chestnut. The latter has borne nuts quite freely for the past five years, and it would seem that it was entirely worth while to attempt the cultivation of this tree normally native to regions considerably farther south. Another interesting arboreal feature is a grove of black walnuts (*Juglans nigra*) planted by Mr. Craig in 1891. At twenty years of age, these trees are from twenty to thirty feet high, and many of them have been bearing nuts for some years. It is to be remembered in this connection that Sir Henry Joly de Lotbinière of Quebec established a grove of black walnuts in that northern latitude many years ago, which has since become quite famous.

Orchard planting, which commenced on the Gibbland Farm in 1873, and was rapidly extended during the eighties, until it comprised some forty acres of Fameuse and other hardy varieties, has lately been extended by the present owner, who now contemplates setting the greater portion of his land to varieties adapted to this region, and famous for their high quality and handsome appearance.

Other planters in this vicinity are also extending their areas, and there seems no reason to expect that the fame of Abbotsford as a fruit-growing section will be dimmed in the future by lack of interest on the part of the incoming residents. What is true of this little English settlement in French Quebec is in large measure true of many other localities in eastern United States. Leaders are needed in the country. Their example is more potent than reams of writing or years of preaching.

ANNUAL REPORT OF THE OFFICE OF EXPERIMENT STATIONS FOR THE YEAR ENDED JUNE 30, 1909

This report, a volume of nearly 450 pages, has been received at the editorial office. Besides a comprehensive review of the work of the different stations in all lines of investigation, it contains numerous illustrations of experiments, and of new buildings in connection with agricultural colleges and experiment stations.

The National Nurseryman

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Official Journal of American Association of Nurserymen.

AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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ROCHESTER, N. Y., DECEMBER, 1910.

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PUBLICITY—Orlando Harrison, Berlin, Md.

EXHIBITS—J. W. Schuette, 5600 Gravois Ave., St. Louis, Mo.

ARRANGEMENTS—John Hall, Rochester, N. Y.; J. H. Dayton, Painesville, O., F. A. Weber, Nursery, Mo.

EDITING REPORT—John Hall, Rochester, N. Y.; Prof. John Craig, Ithaca, N. Y.

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FORESTRY—A. I. Brown, Geneva, Nebr.

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NURSERYMEN'S SHARE IN CIVIC IMPROVEMENT—J. Horace McFarland, Harrisburg, Pa.

ROOT-KNOT—E. A. Smith, Lake City, Minn.

MEMBERSHIP—John Watson, Newark, N. Y.

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American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

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National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.

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Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.

Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.

Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.

Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

APPLE SPORTS

From time to time, variations of standard varieties of apples appear, some of which are improvements, and some of which are merely different. The *Rural New Yorker* recently records a sport of the twenty-ounce, which has been named the Hitchings. This sport varies from the type in producing a fruit which is solid red in color, instead of being striped like the typical twenty-ounce. It is more regular in shape, and usually not ribbed at all; in flavor, it is twenty-ounce; in season, it is about two weeks later than the type. This variation appeared in a lot of trees purchased from a New York nurseryman, H. S. Wiley, of Cayuga, planted by Grant Hitchings of Onondaga County, N. Y., some seven years ago. Its distinctive feature is the much higher color and its relatively later keeping season. Another variety of twenty-ounce is known as the Collamer, which appeared in the orchard of J. B. Collamer & Sons, of Hilton, N. Y. It is interesting to know that the twenty-ounce is so prolific of useful variations. Mr. Hitchings, the orchardist of Onondaga County, expects to propagate this variety for his own use, at any rate, and may possibly put it on the market.

CROWN GALL BULLETIN

A bulletin entitled "Field Studies of the Crown-Gall and Hairy-Root of the Apple Tree," being No. 186 of the Bureau of Plant Industry, has just been received. This publication, a pamphlet of 99 pages, accompanied by ten full-page plates, is by George G. Hedgcock. This document is one which has been awaited with considerable interest by members of the American Association of Nurserymen. We shall present a full review of this in a subsequent issue. Mr. Hedgcock says that the crown gall type of disease occurs on apple trees in two forms, the soft and the hard, and the hairy type in four forms, each of which is described. These diseases develop chiefly the first year on seedlings and root grafted trees in the nursery, gaining entrance almost entirely through wounds. Experiments aimed to ascertain the effect of these excrescences on the growth of nursery and orchard trees showed that nursery trees were stunted very slightly, but that orchard trees were affected so little that the difference was hardly perceptible. The bulletin does not discuss the communicability or infectious character of the malady at length, although it is stated that "the disease apparently did not spread from tree to tree in the nursery rows in the experiments."

The author concludes with recommendations for the avoidance of this root trouble by sanitation, using healthy scions and seedlings, making close-fitting root grafts, storing in sand, and planting moderately deep, avoiding heavy or wet soils, and avoiding the bruising or wounding of the grafts.

The editorial office is in receipt of beautiful specimens of Delicious and King David apples from Messrs. Stark Brothers of Louisiana, Missouri. We have previously expressed our high opinion of the excellent quality of Delicious which these specimens confirm. King David has marked Jonathan characteristics.

COLLEGE MEN FOR NURSERY POSITIONS

A prominent nursery firm in the East writes THE NATIONAL NURSERYMAN as follows:

"Are you acquainted with a young man who is sufficiently qualified in the nursery business to come into our office to take charge of the correspondence department? We would like a man who has been thoroughly trained by a college course in the theoretical side of horticulture, who has a general idea of creating business, who is industrious, a man of ideas, interested in this line of work, and who would be willing to start on a low salary with the opportunity of working himself up to a thoroughly responsible position."

Now, this is a particularly hard order to fill. The college man, after investing four years of time and a good deal of money in education, is usually not willing to start on the apprenticeship footing. This attitude may be mistaken, but it is also wrong for the nurserymen to think that this type of man ought to start on the same plane as the man who has given no extra time or made no special effort to qualify himself along theoretic and academic lines. The old idea of the apprentice in office or greenhouse is not agreeable to men who have served an apprenticeship in the class room and laboratory. On the other hand, there is no doubt that certain apprenticeship is necessary before these men, however well qualified from the college standpoint they may be, can take an efficient part in active and effective business enterprises. There ought to be some consideration on both sides, on the part of the employer and the employed.

Many applications come to departments of horticulture in colleges of agriculture for young men to take positions on private estates and in nurseries, offering salaries such as are paid to uneducated labor. This is hardly reasonable. Yet in cases where the position demands little or no executive ability, but a maximum of brawn, there is no doubt that college training is practically a useless investment, and the employer need not feel that he must pay for it. In the larger position, such as the one described above, there is no doubt that given two men of equal native ability, the man who has had the college training will forge ahead much more rapidly and be able to handle larger enterprises in a much shorter time than the man who is obliged to bank on the information gained from his own observation and experience, and who is without the mind training which class work ought to bring. The NATIONAL NURSERYMAN is quite as pleased to give any assistance it can in bringing to the unemployed in college circles notice of opportunity for advancement, as it is to aid nurserymen in securing an efficient type of labor.

One day I saw a copy of THE NATIONAL NURSERYMAN and thinking it a very good monthly paper, the best for my trade I have ever yet seen in this country, I want to subscribe to it. I enclose herewith one dollar. I should be very much obliged to you if you will send me a copy for this month.

Springfield, Mass.

C. Schüller.

Doings of Societies

REPORT OF AMERICAN POMOLOGICAL SOCIETY

The report of the thirty-first session of the American Pomological Society, held at St. Catharines, Ontario, at the invitation of the Provincial Fruit Growers' Association, is now being distributed to its members. This national society numbers in its membership about six hundred persons, having horticultural interests, either as amateurs or professional fruit growers.

The report, as usual, contains a large amount of information of the greatest value to present or future orchardists and gardeners. In its 350 odd pages, there are chapters on the following subjects: Orchard management; the latest on lime-sulphur sprays, being a symposium on this subject; a discussion of the adaptation of varieties to soils and climates by experts on soil and pomology; the pecan and chestnut by pioneers in these industries; gooseberry culture, with special relation to methods of growing the English varieties; grape varieties of the East and the West; and a very important chapter on co-operation in the marketing of horticultural products.

In addition to these live topics, the volume contains a report of the General Fruit Committee, which is, in effect, a summary and statement of the developmental condition of fruit growing in different parts of the country. This gives the status of fruit-growing projects, the trend of the industry, in different sections, and the outlook. To the person considering the question of engaging in horticulture in some of its forms as a life work, this part of the volume will be of great service.

This society is non-sectional, non-partisan, working only for the advancement of the fruit-growing interests of the country at large. The president of the society is L. A. Goodman, Kansas City, Missouri; secretary, John Craig, Ithaca, New York; treasurer, L. R. Taft, East Lansing, Michigan.

VERMONT STATE HORTICULTURAL SOCIETY

The 16th annual meeting and exhibition of the Vermont State Horticultural Society took place at Grange Hall, Brattleboro, November 7, 8, and 9, 1910. Addresses on important topics in connection with fruit growing were presented by well known men from several of the New England colleges, as well as others versed in horticultural affairs. The premium list includes: Class 1, Apples (with several special premiums); class 2, Pears; class 3, Flowers; class 4, Vegetables.

GULF COAST NURSERYMEN'S ASSOCIATION

This Association met on October 4, at Houston, with Mr. R. H. Bushway in the chair and fifteen members present. Plans for systematizing work were considered. The members were found to be strictly against the taxing of nurserymen's stock, that is fruit trees in the field. The Association agreed to co-operate with the State Nurserymen's Association in testing a case enforcing the taxation.

FALL EXHIBITIONS

SPRAY MACHINERY AT COUNCIL BLUFFS EXPOSITION

One of the features of the National Horticultural Congress exposition held at Council Bluffs, Iowa, November 10 to 19 was a spray machinery competition wherein mechanical tests were made of the different spray machines entered. These tests were under the direction of agricultural engineers and horticulturists who have given special attention to spraying machinery. The results of this competition are to be published in pamphlet form as soon as the data is all compiled.

FLOWER SHOW, BOSKOOP, HOLLAND FORCED SHRUBS A SPECIALTY

The exhibition of forced shrubs and perennials, which will be held in April, 1911, has met with very good support, and will in extent and importance fairly surpass all the Committee's expectations. His Royal Highness Prince Henry has consented to become a patron of the Exhibition and the Royal family have promised several medals. The hundreds of exhibits will require much more space than was expected at first, so that the space occupied by the Exhibition will be at least 3400 square meters. There will be exhibits in almost every class. The number of novelties amounts already to 77. One can therefore easily understand that Boskoop is working with enthusiasm and that everything possible will be done to make the Exhibition one of the most successful that has ever taken place in Holland.

NATIONAL FLOWER SHOW IN BOSTON, MARCH, 1911

The interest is increasing in the second National Flower Show to be held in Boston, March 27th to April 1st, inclusive, 1911. This will be held in Mechanics Building, one of the best halls in the country for this purpose, containing as it does over 105,000 square feet of exhibition space as well as a number of fine convention halls in connection. The exhibition will be held by and in connection with the annual convention of the Society of American Florists, assisted by the American Rose Society, the American Carnation Society and the Massachusetts Horticultural Society, and one of the grandest displays of flowers and plants, as well as general trade exhibits ever brought together under one roof seems assured.

Over \$10,000 in prizes will be awarded in the various classes and it is expected that this large sum will stimulate the interest of growers throughout the country. In the trade departments the space is selling particularly well. Some of the best known concerns in the trade have already applied for space, realizing that the comparatively small cost of exhibiting their manufactures will be more than compensated by meeting the trade from all over the country.

Among those already allotted space in this department are, The Advance Co., Richmond, Ind.; Arthur T. Bod-

dington, New York; Boston Plate & Window Glass Co.; Bobbink & Atkins, Rutherford, N. J.; Bowker Fertilizer Co., Boston; Best Oil Co., New York; Robert Craig Co., Philadelphia; Arthur Cowee, Berlin, N. Y.; The A. T. Stearns Lumber Co., Boston; Geo. M. Garland Co., Des Plaines, Ill.; J. G. Harrison & Sons, Berlin, Md.; A. H. Hews Co., Inc., Cambridge, Mass.; Wait Inter-Locking Steel Co., Newburgh, N. Y.; Lord & Burnham, Irvington, N. Y.; Hitchings & Co., Elizabeth, N. J.; Hammond Paint & Slug Shop Works; F. R. Pierson & Co.; Kroeschell Bros. Co., Chicago, Ill.; Means & Thatcher, Boston; United States Radiator Co.; N. F. McCarthy & Co., Boston; J. Jarndahl, Cambridge, Mass.; H. M. Robinson & Co., Boston; S. S. Pennock-Meehan, Philadelphia; The Chilton Co., and others are in correspondence.

Even at this date the preferred positions are getting scarce and an early application is urged upon intending exhibitors. Chester I. Campbell of 5 Park Square, Boston, is the general manager and to him should be addressed all communications and applications.

FALL FLOWER SHOWS

NEW HAVEN HORTICULTURAL SOCIETY

This society held its tenth annual exhibition in the commodious Music Hall, New Haven, November 1 to 3. The decorations of American flags, bunting, and golden eagles, which had been allowed to remain in place after having been used by the "Eagles," afforded an unusual addition to the floral display. The center of the room was occupied by a group of palms and rare decorative plants, and there were six other groups of palms and ferns exhibited by John N. Champion. The rest of the exhibits consisted largely of orchids, chrysanthemums and violets. Among the names which appeared frequently on the list of awards, are Adam Peterson, gardener for Miss M. T. Cockcroft, and J. T. Burns, gardener for Miss C. A. Bliss.

GOVERNMENT CHRYSANTHEMUM EXHIBITION

This annual chrysanthemum display of the Bureau of Plant Industry, Washington, D. C., opened on November 2. There were on exhibition 110 named varieties of the tall single stem Japanese type, 44 named varieties of Pompons for outside planting, 70 varieties of named seedlings, and 140 unnamed seedlings. The Pompons were placed on benches at the side of the hall, while the tall plants were ranged down the center. One of last year's seedlings, having attained the extraordinary height of 11 feet, was too tall for the exhibition room. Several of this year's plants which give promise as commercial varieties are as follows: Elise Papworth, white; Oroba, white; Alice Lemon, flesh color; Mrs. J. Wells, wine color; Mrs. D. Syme, white; Mrs. H. Stevens, gold salmon bronze; Calvat 189, pink, and W. Mease, pink.

MONMOUTH COUNTY, N. J.

The Monmouth County (N. J.) Horticultural Society held its thirteenth annual chrysanthemum exhibition on October 26th in the Armory at Red Bank. On account of unfavorable weather, the cut chrysanthemums were inferior to some that have been seen at former exhibitions; but the excellence of other exhibits, particularly the exhibit of carnations, outweighed the deficiency in the other department. A long list of awards shows the interest which is taken in this annual event. The judges were Peter Duff, Orange, N. J., and A. J. Manda, Brooklyn, N. Y.

Another New Jersey exhibition of recent days was that held jointly by the Morris County Gardeners' and Florists' Society and the Chrysanthemum Society of America, at Morristown, at the time of the ninth annual meeting of the latter society. The chrysanthemums, roses, and carnations all received high praise. The newly elected officers of the Chrysanthemum Society of America are Elmer D. Smith, president; Chas. H. Totty, vice-president; C. W. Johnson, secretary; and John N. May, treasurer.

CHICAGO

The Horticultural Society of Chicago opened its eighteenth annual show at the Colliseum on November 8. The attractive floor arrangement was a reproduction of a garden at Monte Carlo, which met with warm approval of the visiting public. Another feature, which was not only interesting but educational, was the city back yards exhibit. This consisted of flower beds laid out to illustrate the best way of utilizing small plats of ground. The classes in the list of awards were chrysanthemum blooms, chrysanthemum plants, and miscellaneous plants.

APPLE SHOW, MARTINSBURG, W. VA.

At the second annual apple show and carnival held at Martinsburg, W. Va., the last week in October, nearly 600 plates of apples were exhibited, besides 30 barrels and about a hundred boxes. Besides the fruit itself, various commodities used in fruit culture had a place in the exhibit, such as machinery and insecticides. Before the close of the exhibition, the Appalachian Fruit Growers' Association was organized with the following officers: Alex. Clohan, president; N. T. Frame, secretary; E. C. Henshaw, treasurer; all of Martinsburg. The new association is composed of growers residing between Harrisburg, Pa., and Roanoke, Va. An executive committee will be selected before long, to be composed of five growers from each state in the belt.

VINCENT'S FOURTH ANNUAL DAHLIA SHOW AND HARVEST HOME FESTIVAL, WHITE MARSH, MARYLAND

This exhibition of flowers, fruit, and vegetables, together with a sale of groceries, candy, home-made jellies, etc., by the ladies of the place—all for the assistance of the local church, in which Mr. Vincent's entire family is prominent—took place on the last four days of September.

Dahlias and cannas were the leading flowers displayed. The dahlias occupied three benches, each about 100 feet long. A striking feature was the bench containing seven leading varieties, each perhaps ten feet across, and carried up to the ceiling, loosely arranged with oak leaves. Among these varieties were three which were originated by the Vincents at White Marsh,—Mrs. C. W. Bassett, a deep pink; Wm. Pierce, a shell pink; and Mrs. Chas. L. Seybold, a double peony-flowered rose pink. Numerous indeed were the kinds shown, for there are now 45 acres of dahlias raised at White Marsh.

The collection of fruit and vegetables, taking up a space 100 feet long, was furnished by the farmers and growers of the vicinity. From little gourds, two and one-half inches long, this interesting display ranged through pumpkins, sweet and Irish potatoes, peppers, beans, watermelons, etc., to a box of strawberries. And the show did not end here, for above these, in tempting array, were cans of piccalilli, canned fruits, and jellies.

A lesson that growers may learn from this exhibition is that almost any of them could utilize their own grounds for a similar purpose; and once started, they would find that such a plan would increase in worth, as well as popularity, as the years went by.

ROCHESTER FLORISTS' ASSOCIATION

It is estimated that at least 27,000 people saw this popular annual flower show, larger and more attractive than ever. That part of the exhibit in Convention Hall represented an immense flower garden, with winding paths, while that in Exhibition Hall was a representation of the Hill Garden in Japan—a scene of mountains, rocks, water, trees, tea houses, the whole effect being without question peculiarly Japanese. The main flower show in the large hall was in charge of the various Rochester firms, each having a space separated from the rest and showing striking individuality.

LENOX FLOWER SHOW

While the annual exhibition at Lenox, Mass., is termed a chrysanthemum exhibition, the exhibits are not taken entirely from that branch of horticultural work; for the vegetable display was one of the finest, in fact, perhaps the very best, ever seen in this country. First prize onions averaged 3½ pounds each, while parsnips measured 4 feet and carrots 3 feet.

As to the floral part of the exhibition, three contestants were entered for the plant groups and two for the orchid groups. The awarding of prizes was no easy matter, on account of the merit of all the exhibits. The chrysanthemum blooms were just a little below the standard set in former years.

A DAHLIA GROWER.

D. W. Babcock, Berlin, Md.—I am taking up our Dahlias now; have about 5 acres and the greatest crop of roots I ever saw. Gladioli all harvested, 200,000. We are having an extra fine fall here for working. Everything has made a large growth and is going into winter quarters in a fine, well ripened condition. There is a greatly increased interest and demand for oak and nut trees, also evergreens, especially the pines.

COURTESY OF MONTANA FLORISTS AND NURSERYMEN

The editor of THE NATIONAL NURSERYMAN acknowledges with thanks honorary membership in the Florists' and Nurserymen's Association of Montana. He appreciates this recognition, and wishes the newly organized association a long and successful career. The businesslike manner in which the association starts operation augurs well for a life of progress and service in behalf of the nursery and floricultural interests of Montana. The officers of the association are T. E. Mills, Helena, president; D. J. Tighe, Billings, vice-president; W. J. Hugo, Helena, secretary-treasurer.

NATIONAL NUT GROWERS' ASSOCIATION, MONTICELLO, FLA., NOV. 1-3.

At the meeting of this Association, which, although only nine years old, has made a notable record in that time, representatives of fifteen states and the District of Columbia were in attendance. The following states were represented: Alabama, Florida, Georgia, Illinois, Louisiana, Michigan, Minnesota, Mississippi, Maryland, Nebraska, North Carolina, South Carolina, Texas, Virginia, and West Virginia. The attendance approximated 150 persons.

Among the important papers presented was one by M. B. Waite, of the United States Department of Agriculture, on diseases affecting the pecan. The two diseases of any importance which Mr. Waite discussed were the scab and rosette. The former, he declared, was a relative of the better known form affecting apples and pears, and was amenable to the same system of treatment, namely, spraying with the standard fungicides, while the latter seemed to be a result of peculiar conditions. No specific organism had been associated with the rosette thus far, and owing to its appearance and disappearance under varying conditions, the presumptive evidence was strong that to some extent it was the creature of circumstances. A thorough study of the subject is being made by the United States Department of Agriculture agents, and it is hoped that definite information will be obtained before very long.

Among other important papers was one on legislation affecting the horticulturist, by Prof. W. N. Hutt of Raleigh, N. C. This was a résumé of recent legislative action affecting the control of injurious parasites of orchard and garden, and the handling of the products of nut and fruit trees. Valuable papers were contributed by Messrs. H. A. Gossard of Ohio on nut growing in that state; J. C. Cooper of Oregon on the Persian walnut in the Northwest; and the nutritive and economical value of nuts, by Professor Jaffa of California. These, with the reports of committees, completed the main portion of the sessions.

Considerable time was given to the visiting of orchards and nurseries in the vicinity.

Officers elected—President, H. K. Miller, Monticello, Fla.; first vice-president, J. B. Curtis, Orange Heights, Fla.; second vice-president, H. C. White, DeWitt, Ga.; secretary, J. F. Wilson, Poulan, Ga.; treasurer N. B. McNeilly, Richmond, Va.

Business Movements

BIG FIVE NURSERY

R. E. Smith, R. W. Ward and S. S. Rogers of Blythe City; T. F. Flint of Berkeley, and N. D. Ingham of Santa Monica, are directors of the Big Five Nursery, recently incorporated, with headquarters at Blythe City, Cal. The capital stock is \$25,000.

HORTICULTURAL CHEMICAL COMPANY EXPANDS

The Horticultural Chemical Company, 1210 Commonwealth Bldg., 12th and Chestnut Sts., Philadelphia, has purchased the business of the Target Brand Company of Martinsburg, W. Va., and the Chester County Chemical Company of West Chester, Pa. The factory will be removed to the vicinity of Philadelphia. Target Brand Scale Destroyer and Scaline, a lime-sulphur solution, are among the products of this company.

THE NUT NURSERY COMPANY, MONTICELLO, FLA.

"We have recently taken up the growing of Satsuma orange trees, and for this reason have decided to change the name of our firm from The Nut Nursery Company to Simpson Nursery Company, says Manager R. C. Simpson. There has been no change, however, in the personnel of the firm, or management of the nursery.

We have found that our soil and climate are peculiarly adapted to the raising of the Satsuma orange as well as the pecan and for this reason find it desirable to give a share of our time to citrus fruit. In the future we will grow nothing in large quantities except the pecan and the Satsuma, and those wishing the best that can be produced in these two lines will find what they want at our nursery.

We wish to thank our many customers and friends for their liberal support during the past few years, which has enabled us to build up a very successful nursery business. We are sold out completely for this season, but solicit your future patronage."

MR. COE FOR THE ORIENT

Mr. Ernest F. Coe, president of the Elm City Nursery Co., New Haven, Conn., sails from San Francisco, Dec. 13th, for Japan. The winter will be spent in travel and study of Japanese gardens.

VALDESIAN NURSERIES, BOSTIC, NORTH CAROLINA

Business is good and everybody here is working on the "fly" these days with prospects for a big winter and spring business.

SHENANDOAH, IA.

"E. S. Welch, of Shenandoah, Iowa, and G. L. Welch, of Fremont, Nebraska, have purchased an interest in the Kelsey Nurseries, of St. Joseph, Missouri, with Mr. C. G. Ferguson. The business will be incorporated, and continued on a larger scale, under Mr. Ferguson's management."

CENTRALIA, ILL.

C. H. Webster of Centralia, Ill., has recently sold his nursery grounds at Centralia, Ill. and moved to The Dalles, Oregon, where he will take up the nursery business in the West. He will be pleased to be put on the mailing list of all nursery friends, at his new location.

WEST VIRGINIA

The following orchard companies have recently been incorporated in West Virginia:

The Cherry Run Orchard Co., capital, \$25,000, incorporators, Charles Burdett Hart, Wheeling; Alex. Clohan and Ben J. Thompson, Martinsburg, and John L. Lehman, Fairmont.

The McKown Orchard Co., incorporators, H. H. McKown, Innwood, Alex. Clohan, T. W. Martin, H. L. Alexander and Max Von Schlegell, Martinsburg.

BAY STATE NURSERIES ENLARGE

The nurseries of the late W. B. Whittier, Framingham, Mass., have been purchased by W. H. Wyman, of the Bay State Nurseries, North Abington, Mass. They will be operated under the old title, W. B. Whittier & Co., and independently of the North Abington nurseries. Mrs. Whittier has sold all her interest in the nurseries. This purchase will make Mr. Wyman's nurseries the largest in New England and among the most extensive in the east.—*Florists' Review*.

Our Book Table

THE PECAN AND ITS CULTURE, by Prof. H. Harold Hume. Published by the author, 1910. Second edition. 5¼x7½. 195 pages. \$1.50.

A second edition of this valuable book has appeared, dated 1910. In preparation for this publication, the first edition has been largely re-written, and new illustrations have been obtained; for in the four years that have passed, knowledge relative to pecans has increased very materially. There seems now to be no question that the time will come, and that not far in the future, when the general public will be purchasing pecans by varietal name, as is now the custom with so many other fruits.

In this book the reader is reminded that, while the best known of our fruits, such as the orange, apple, and English walnut, are exotics, not only is the pecan a native, but even in the short period during which it has been cultivated, it has come to have a greater value than any other native fruit tree.

In this day, when so much is being written on the nut as an article of food, this book will prove very interesting, even to persons who are not growers of the pecan.

I herewith enclose check for \$1.00 for renewal to your valuable paper. I enjoy reading the NATIONAL NURSERYMAN, also looking at the pictures presented from time to time. Trust that you will enlarge on the latter feature.

Freeport, Ill.

JOHN M. WISE.

Fruit and Plant Notes

BURBANK'S NEW PEACHES AND PLUM

Two new varieties of peaches and one of plums have recently been developed by Luther Burbank at Santa Rosa. The peaches are both of the Crawford and Muir strains, the one taking all the good qualities of the Crawford over to the Muir, and the other reversing the process. Thus, in one the juiciness and high color of the Crawford are combined with a pit of smaller size than that of the Crawford, while the other is an improvement on the Muir as to flavor and juiciness, and has a pit but little larger than that of the Muir. The new plum is a seedling of the Bartlett, and has a rich color and a small pit.

DISTRIBUTION OF SPINELESS CACTUS

Next spring the United States Department of Agriculture will distribute about ten tons of spineless prickly pear cuttings. This stock is grown mainly at Chico, Cal., and Brownsville, Tex. Eight or ten varieties are now being grown for distribution to those who wish to test them as an economic crop. These plants do not succeed where the temperature remains for any length of time below 20°F. Applications should be made to Office of Farm Management, U. S. Department of Agriculture, Washington, D. C., before the first of January, 1911.

GRAPE-SPRAYING EXPERIMENTS IN MICHIGAN IN 1909, Bureau of Plant Industry, Circular 65.

SUMMARY. "The work in 1909 has shown that black-rot can be controlled by proper methods of spraying and cultivation even in a season particularly favorable for the development of the disease and in a vineyard in which the fungus has become thoroughly established and very destructive, there being a difference of 86.4 per cent between the amount of rot on the unsprayed check and the best sprayed plot.

In Mr. Gidding's vineyard, which had been thoroughly sprayed the previous year, there was practically no loss from black-rot on the portions sprayed with Bordeaux mixture, while the loss on the check was 39.8 per cent.

The best fungicide used was Bordeaux mixture, and of the different formulas for this the 4-3-50 has always given good results. The 3-2-50 mixture gives promise of being a good fungicide, as about the same results were obtained with it as with the 4-3-50 formula. It may prove as efficient as the 4-3-50 formula, but should be tested more thoroughly.

Of the two nonstaining compounds used, neutral copper acetate and ammoniacal copper carbonate, the former was found to be the better fungicide. For comparison, see Plate III, figures 1 and 2. It, however, injured the foliage badly when used throughout the season, but seemed to have no ill effect as a final application.

The lime-sulphur compounds are not suitable fungicides for grapes, the self-boiled, because it does not control the rot, and the commercial lime-sulphur because it does not control the rot as well as the Bordeaux mixture and is very injurious to the vines.

Of the adhesive compounds used, the results with resinfishoil soap were better than those with the iron sulphate. The addition of 2 pounds of soap to 50 gallons of the mixture used in the last application seems to do as much good as where it is added in all sprayings.

The disease can be controlled with five applications of 4-3-50 Bordeaux mixture thoroughly applied, soap being used in the last application. "Thoroughly applied" means that every portion of the vine, and especially the foliage and fruit, receives a coating of spray mixture."

Forest Service, Bulletin No. 66. This comprises a sketch of the forest belts and forest plantings of western Nebraska and Kansas. By illustration and text it convinces the settler of that region that forested conditions are not only possible, but secured with comparative ease, even in that supposed semi-arid district.

Quiz Column

CUSTOMS CLASSIFICATION

A prominent importing firm writes as follows:

"Our last winter's shipment from Europe included quantities of rose stocks—*Rosa canina*, *R. rubiginosa*, *R. rugosa* and *R. setigera* from France, and *Rosa rugosa alba* and *rubra* 18–24 inch from Holland.

We entered the French stock through the custom house as "Rose stocks" dutiable at \$1.00 per 1000 and the Holland *Rugosa* seedlings at 25 per cent as "shrubs." All were raised by the U. S. Appraisers in spring to the classification of "Roses, budded, grafted or own roots" dutiable at four cents each. We were obliged to pay "under protest" additional duties of about \$800 and have finally succeeded in getting our "hearing" before the general board of appraisers.

This hearing will involve *Rosa rugosa alba* and *rubra* only; decision upon the other rose stocks will be largely influenced by the decision on these.

We seek to establish the following facts:

1. That *Rosa rugosa* seedlings from France are stocks or seedlings and as such are dutiable at \$1.00 per 1000 and not as rose plants dutiable at four cents each. (They are freely offered by French nurserymen at from \$1.60 to \$3.00 per 1000).

2. That the French *rosa rugosa* seedlings are actually seedlings—grown from seed.

3. That they are not "Roses."

4. That they are not grown in France in any other way than from seeds.

5. That the Holland grown *Rosa rugosa alba* and *rubra* 18–24 inch are grown exclusively from seeds.

6. That they are Shrubs—not Roses.

COMMENTS BY EDITOR

Several species of the rose group propagated from seed are imported in large quantities from France, and are used by landscape gardeners and planters in general, for the general purpose for which shrubs are employed, in massing and banking in lawn, park, and cemetery-planning. In this class are included *Rosa rugosa*, Japan rose, and its varieties *alba*, white, and *rubra*, red; also *Rosa setigera*, prairie rose. *Rosa Canina*, dog rose, and *Rosa rubiginosa* sweet briar, are used primarily as stocks for the propagation of named varieties of hybrid perpetuals, and other garden forms, but are used with the species just named quite freely in shrubbery planting. These forms should not be classified as roses budded, grafted, or on their own roots as grown from cuttings, because they are propagated from seed like our garden vegetables, and are a much cheaper grade of stock than the grafted and budded varieties. These roses seed very freely, and this fact enables the nurseryman to propagate them very cheaply and extensively. It would be foolish and absurd for any nurseryman to attempt to grow them in any other way than from seeds.

The Holland grown varieties of the Japan rose, *Rosa rugosa*, known under the name of *alba* and *rubra*, white and red, come true from seeds also, and are grown in the same way that the previous forms mentioned as being imported from France and propagated. These plants are used for the same purpose that the usual run of shrubs are employed in this country, namely, for setting in borders, massing in clumps in lawns, parks, and so forth. We think there is no

doubt at all as to the intent of the law in separating that class of roses which are propagated by the more expensive methods of grafting and budding or from cuttings struck in the bench, from those which are grown from seed; and all these species under question are in the latter category.

EDITOR.

STATUS OF DISTRICT SOCIETIES.

Would you kindly tell me if there is any formal enrollment of this Society to be carried out or whether this and other similar societies are quite independent; also if it is possible to get a list of States having like Associations. W. J. HUGO, See'y.

Florists' and Nurserymen's Association of Montana.

There is no enrollment of your society in any other association necessary, for as we understand it, you are organized independently and not affiliated. The other state or sectional associations of the country usually keep in touch with the national organization, the secretary of which is Mr. John Hall, Granite Bldg., Rochester, in order to get the benefit of such action on tariff, legislation, and the like, brought about by the influence of the national society.

All associations of this kind are listed in the Florists' Directory, published by the *American Florist* of Chicago. It would be quite worth your while to have a copy of this directory in your possession. You will find on the editorial page of this journal a roster of the principal societies of the nurserymen of the United States. We wish your organization every success.

THE NEWLY ELECTED MEMBER OF THE MONTANA LEGISLATURE

Mr. W. E. McMurry of Hamilton has been appointed chairman of the committee on legislation of The Florists' and Nurserymen's Association of Montana.

The additions to membership of the Association during the past week are: Mr. David Gibson, Helena, and Mr. W. E. Gleason, Florence.

ASSOCIATION OF WESTERN NURSERYMEN

The annual meeting of this progressive society will be held in Kansas City, December 20 and 21, when an attractive and instructive program will be presented. This regional organization is one of the active factors in progressive nursery work. It has co-operated continually with the national organization in promoting movements and enterprises favorable to the nursery interests the country over. It is only by this type of co-operative effort that the largest benefits from organizations can be expected. President E. P. Bernardin, Parsons, Kansas; Secretary, E. J. Holman, Leavenworth, Kansas.

AMERICAN POMOLOGICAL SOCIETY.

President L. A. Goodman of Kansas City and Secretary John Craig of Ithaca, N. Y., are making arrangements for the forthcoming meeting of the above society in Tampa, Florida, at the end of January, 1911. There will be an extensive exhibit of fruits in competition for Wilder medals.

REPORT BY EX-PRESIDENT J. B. WIGHT*(Continued from page 822)*

and the sustained interest during the meeting was the best in the history of the Association. Many interesting papers and addresses were delivered. Monticello is a pecan growing center. There are several large nurseries which are devoted almost entirely to the growing of pecan nursery stock; and there are in the vicinity of the place several thousand acres in pecan orchards.

The second day of the convention was given entirely to sight-seeing, visits being made to the nurseries and orchards about the place. Owing to the fact given above, the greatest interest of the convention centered in the pecan. There is no diminution in the interest taken in this nut. Thousands of acres will be set this year to orchards. In fact, the number of pecan orchards set will be limited only by the supply of trees. The demand for pecan trees this year is far beyond the supply.

There is not a body of men anywhere who believe more thoroughly in their business than do the members of the National Nut Growers' Association. Eight different places were applicants for the next annual meeting. The choice of the place was left to the executive committee, with the likelihood that Mobile, Ala. will be selected.

Mr. H. K. Miller, of Monticello, Fla., was elected president for the next year.

NUT GROWING IN NORTH CAROLINA

W. N. HUTT

Nut growing though a comparatively new industry is rapidly becoming one of great importance in the United States. Nuts were formerly considered to be valuable only as confections; now they are generally recognized as valuable foods. Every year sees an increase in nut consumption with a corresponding increase in importation of foreign nuts. With the exception of English walnuts and almonds which are grown on the Pacific coast, very little has been done in this country in the commercial production of nuts. In the last decade, however, it has been found out that the richest of all nuts is a native of the southern states. This is the pecan, than which there is none better. This valuable nut is native to the Mississippi Valley and grows to perfection almost anywhere in the southern states. In Texas wild pecans are gathered from the woods skirting the river banks and are shipped out by the car load.

A great impetus has been given pecan production in the finding of individual trees which produce nuts of large size with thin shells well filled with rich, fine-flavored meat. It has been found that these characteristics in pecans can be perpetuated by budding and grafting, the same as is done in our varieties of fruit trees. Hundreds of thousands of budded and grafted pecan trees are now being produced in southern nurseries and thousands of acres planted to pecan groves in the south.

In recent investigations in pecan culture it is found that pecan trees grow and produce well in latitudes far north of what was formerly considered the pecan area. Pecans grow to perfection in the coastal region of North Carolina; they do well in south eastern Virginia and are even found

SURPLUS STOCK

Cuthbert
Miller
King
Ruby
Brandywine

Red Raspberry

Cumberland
Kansas
Gregg

Black Raspberry

Columbian
Haymaker

Purple Raspberry

Wilson
Eldorado
Early King

Blackberry

**We guarantee all plants to be first-class
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Write us for special low prices

N O W**O. A. D. BALDWIN**

BRIDGMAN, MICHIGAN

Savings Invested in Realty

IT pays better than a bank account. Well selected realty investments make enormous returns. It is the safest and most productive form of investment.

On December 1st, to introduce ourselves, we will offer **1000 building lots**. This property is only thirty minutes ride by trolley from the business center of the City. We predict that these lots will increase 500% within three years. Buffalo has practically no vacant houses and a population of 450,000. Extension is the order of the day and with extension values will increase wonderfully. The starting price will be \$75.00 and upward, depending on location. Payments \$25.00 cash, per lot, balance in thirty-six equal installments. The majority of lots face on street car line. The most outlying within five minutes walk. The property is already improved, cement side walks, sewerage, water works, gas main and electric light service. Price of lots will advance Jan. 1st. Get in now and reap the benefits. By depositing \$10.00 per lot, before December 1st, we allow a credit of 10 per cent. on your purchase. Satisfaction guaranteed or your money refunded. Title to each lot purchased will be conveyed to Trust Company to be delivered when payments are completed. If you die before you complete payments, a clear title is made to your heirs, at no further cost. This is better than Life Insurance.

We want agents in your locality. Send us names and addresses of neighbors who you think may be interested.

Enormous profits are being made by others. Join before it is too late. This is one of the best Realty investments ever offered. Write for further particulars.

Buffalo Land Security Co.**395 Ellicott Sq. Bldg.****BUFFALO, N. Y.**

growing as far north as Pennsylvania. Two very valuable varieties, Appomattox and Mantura, have been found in Southern Virginia and are now being extensively propagated for planting in the northern portions of the pecan area.

In North Carolina seedling pecans are found growing all over the coastal region. These nuts are not generally large in size but are usually well filled with meat. Nearly every homestead has its pecan trees and in some towns they are used quite largely for shade and ornamental purposes. The product of such trees is found in stores as a staple food product. Some budded and grafted trees have been planted here and there which are now coming into fruit. These are so markedly superior to the seedling trees that they attract a good deal of attention. A six-year-old Stuart tree at New Bern, N. C., bore last year 18 pounds of nuts. This shows what early and heavy crops are possible from budded trees.

In order to obtain exact data on the behavior of the different standard varieties of pecans in North Carolina, the State Horticulturist had variety plantings made on three of the different test farms of the State Department of Agriculture. One of these farms is situated in the southern part of the coastal region near Wilmington, N. C. The second is in the northern part of the coastal plain at Rocky Mount, 100 miles north of the first. The third planting is at Statesville, N. C., in the Piedmont, at an altitude of 1000 feet.

Twenty-seven varieties have been planted on each of these farms. The trees on the coastal farms have grown remarkably well and not a single one has been winter killed. On the Piedmont farm a number of varieties have shown that the altitude is somewhat too high for them. From the data obtained from these plantings an illustrated bulletin has been published for general distribution.

The records of heavy yields of seedling trees in the coastal region of North Carolina and the rapid growth and early bearing of named varieties of pecans show that soil and climatic conditions are very favorable here for the growing of pecans in a commercial way. For the last two seasons this subject has been brought before the people of Eastern Carolina at Farmers' Institute meetings and as a result a great many budded trees have been planted and also a few commercial groves set.

We find that good cotton land is ideal for the growing of pecans and we advocate the setting of budded pecan trees as a cure for low priced cotton and the dreaded boll weevil.

IN FAVOR OF LOW HEADED TREES

When I say a low headed tree, I do not mean a dwarf, but any of the standard varieties with the first branches from two to three feet from the ground. These are very much longer lived, more vigorous, and altogether more satisfactory than any dwarf possibly can be. The only place for the latter is on the grounds of some gentleman who has very little room, and wants a few trees for his own pleasure. The notion that they will come into bearing earlier is a mistake, for all the evidence goes to show that standards low headed and properly pruned will bear as soon.

The advantages of the low headed trees are these: The branches protect the trunk. We are hearing a great many complaints of damage by sun scald and so-called "collar rot," many of which are doubtless due to exposure. The little tree has been forced in the nursery row in the shade of another tree. We set it out in the

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel
INDIANA HARBOR, IND.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

National Florists' Board of Trade, 56 Pine St., New York.

Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of
ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES;
TWO YEAR CALIFORNIA PRIVET, CAROLINA
POPLARS, and CATALPA SPECIOSA.

WE INVITE YOUR INSPECTION.

Easterly Nursery Co.,

CLEVELAND, TENN.

Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

open, where at one time the temperature is away below zero and at another 100 degrees. No one saw any trouble with a tree that came up wild in the fence corner. Nature took care of that and protected it by its branches.

Next, such a tree suffers very much less from wind, and fruit which falls can be gathered, and is as valuable as any on the tree. It can be picked at very much less expense, and with varieties like the McIntosh referred to, often as they ripen can be put directly in a box, and so easily graded. These trees, experience shows, come into bearing at an early age, and over and above all can be thoroughly and economically sprayed.

All these reasons doubtless appeal to you as good, but I know you will be saying, "How are you going to cultivate such a tree?" The point is well taken, but the objection is more seeming than real. I have done my large trees more harm than good by deep cultivation close up. As a matter of fact, before these low headed trees come into bearing they can be worked as deep as need be with a one-horse reversible beam plough, and after the limbs get too low with the modern orchard tools, one can do all the cultivation that is necessary, and do it well. Of course, one would not head a variety like the Greening as high as he would a Spy or a Baldwin, and in both cases the pruning must be somewhat different from the high headed tree.

EDWARD VAN ALSTYNE.

PROTECT THE MUSKRAT

THE MUSKRAT. Farmers' Bulletin N. 396 (U. S. Dept. Agr.).

This is one of the most interesting of the many instructive publications by the Bureau of Biological Survey that we have seen. It deals with the life history and economic value, both from the standpoint of fur production and as food supply, of the muskrat, the place of the muskrat as an injurious agent to farm crops, and the general outlook bearing upon the cultivation of this type of native product. The author, Mr. Lantz, makes out a strong case in favor of the muskrat and concludes that the animal is of large economic value and should be protected by proper laws. "Legal enactments should forbid their destruction during the reproducing season and whenever their furs are not prime. Spearing and shooting should be prohibited. Muskrat houses should be protected at all times. The trapping season should be nearly uniform for the different states. If properly protected the muskrat will continue to inhabit our rivers and ponds for an indefinite period and to furnish a stock of furs for our own and future generations."

DEAR SIRs:—Just continue our "adv." in December issue. Results very satisfactory.

ALVIA G. GRAY,
Mgr. Gray's Nur. Ind.

Among Experiment Station Workers

Bulletin 24, Dept. of Agr., Ottawa, Canada. "A Report on Some Trial Shipments of Cold Storage Apples," by J. A. Ruddick, Dairy and Cold Storage Commissioner. June, 1910.

Experiments in the cold storage of apples, together with tests of early vs. late picked fruit, with a view to eliminating the losses occasioned by deterioration in ordinary frost-proof storage, and the consequent necessity of repacking, bring forth some highly interesting results. Canadian-grown apples were placed in storage in eight different lots, and held for shipment until March, April, or May. Lot No. 1 was placed in frost proof storage for the sake of comparison, and lot No. 2, composed of apples from the same orchards, and similarly packed, was held in cold storage. Both these lots were sold in Glasgow, March 15. Data shows the condition of the cold storage fruit on March first to have been such that it was necessary to use but one barrel of the 155 to "plug" the remaining number, while five barrels of the fruit placed in ordinary storage were required to repack the remaining 87. On the arrival of the apples

FELIX and DYKHUIS BOSKOOP, HOLLAND ROSES

Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina

A Full Line of Hardy Nursery Stock
Price List Free

F. KUIPER, Nurseryman

Purveyor to the Court, VEENDAM, HOLLAND

—offers—

1 YEAR APPLE SEEDLINGS IN VERY
LARGE QUANTITIES

in the measures of 3-5 m.m. 5-7 and 7-12 m.m.

FOR SALE Natural Peach Seed

Correspondence invited

J. E. HARRIS

Box 662

KNOXVILLE, TENN.

CONTRACT TREES 1911

Would like contract to grow a few thousand Stayman's Winesap trees for delivery Fall 1911. Cions from the regular bearing trees.

J. RUSSELL SMITH, Round Hill, Va.

NOW IS THE TIME for fall spraying of orchards and shade trees. Just after the fruit and leaves are off is the ideal time. You exterminate three-quarters of the pests with the fall application, then in the spring you get the rest. That is the only way to be sure you have made a clean job of it.

EVEN THEN YOU ARE NOT SURE unless you use the best spraying machine and the best nozzles. It's foolish to experiment and it's worse than foolish to pay twice or three times as much for an inferior sprayer when you can get the Champion and be certain of results at a lower cost. Working nights now to keep up with the big fall demand, but if your order comes quickly we can make prompt delivery. Catalog on request. 318 Woodward Ave., Detroit, Mich.

Champion Manufacturing Company

Manufacturers of the Champion
Automatic Power Sprayer
PONTIAC, MICHIGAN.

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor
(Successor to Blair & Kaufman)

Reliance Building, Kansas City, Mo.

Offer for SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

NATIONAL NURSERYMAN PUB. CO.:

We enclose \$1.00 to renew our subscription to the NATIONAL NURSERYMAN. We sure must have it as long as we are in the nursery business.

M. S. Kellogg, Prop.

Very truly,
Kellogg's Nursery.

in Glasgow, the inspector reports of lot No. 1 that "while in very fair order as a whole, . . . the fruit was rather ripe and inclined to give way." But of No. 2, he says that those counter-marked A were in good condition, of good color and even size, and those countermarked B, some of the fruit being smaller, were also in good condition with just an occasional bruise, and a few apples showing brown in the barrel.

The sale of the two lots resulted as follows, there being a loss in both cases:

	Difference per barrel in favor of	
	Cold storage after paying storage charge of 25c. per bbl.	Frost proof storage.
Spy No. 1	\$0.70
Spy No. 2	0.04
Baldwin No. 1	0.25
Baldwin No. 2	\$0.13

STORE QUICKLY AFTER PICKING

There is no direct comparison in the case of the other six lots, as they were taken from different orchards and all held in cold storage, with no check lot in an ordinary warehouse. But it is clearly demonstrated that, in order to get the best results, the fruit should be placed in cold storage with the least possible delay after picking. As to time of picking, it appears that the later picked fruit had better keeping qualities.

But perhaps the factor of chief importance to commercial interests, as demonstrated by these trial shipments, is the practicability of dispensing with repacking when fruit has been carefully packed at the start, and promptly placed in cold storage.

In considering the results of these experiments, it must be remembered that the expenses connected with the superintending of the shipments by members of the Department of Agriculture, together with the carefully kept records, were much greater than they would have been in an ordinary commercial transaction, when handled by the producers.

Catalogues Received

Jewell Bulletin, Vol. VIII, No. 10, Oct. 10, 1910. This bulletin is published monthly by the Jewell Nursery Co., Lake City, Minn., for the benefit of the agents of the company.

"Jewell Trees Grow," The Jewell Nursery Co., Lake City, Minn. A descriptive pamphlet of the activities of the Jewell Nursery Co., illustrated with numerous views of the grounds.

McHutchison & Co., 17 Murray St., New York City. Schedule of new official tariff rates on bulbs, fruit stocks, and seeds, effective Aug. 5th, 1909.

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W. H. Hudson & Co., 218 Goldhawk Road, London, W. C., England.

Magnolia Grandiflora

We collect the small seedling "plants and seed" of this magnificent Southern evergreen tree from the forest. Guaranteed genuine.

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PRINCETON NURSERY
Princeton, Ind.

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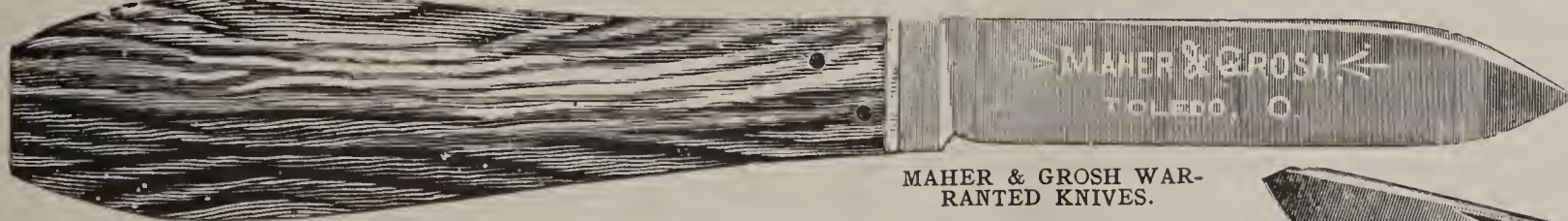
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The plants we offer are strong one year old field-grown stock.

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For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, combined with the quality of our product is unsurpassed.

Samples and prices are at the command of a communication from you.

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Philadelphia Office, West Chester, Pa.
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Grape and Currant Cuttings and Light
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150000 Peach—One Year. All leading varieties.

5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

Also general line of other stock. *Personal inspection invited.*

Our Blocks of Cherry are among the largest in the country. None better.

STANDARD AGRICULTURAL BOOKS

THE GOLD MINE IN THE FRONT YARD, by C. S. Harrison. A book about flowers, both for ornamentation and commercial culture, written with special reference to Northwestern conditions. Illustrated. 280 pp., Price, 12mo. cloth \$1.00.

EVERGREENS AND HOW TO GROW THEM, by C. S. Harrison. A complete guide to selection and growth of evergreens for pleasure and profit, from seed and nursery, to wind-breaks, and hedges. Illustrated. Price, 12 mo. cloth, 100 pp., 50 cents; paper, 25 cents.

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THE NATIONAL NURSERYMAN PUBLISHING CO., 218 Livingston Building
ROCHESTER, N. Y.



THE NATIONAL NURSERYMAN



JANUARY, 1910

Published Monthly at Rochester, N.Y., in Behalf of the Trade Interests of Nurserymen, Seedmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

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PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.
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OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
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ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
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by the thousand.

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Baltimore Belle Crimson Rambler
Dorothy Perkins Seven Sisters
Queen of the Prairie

CUT-LEAF WEEPING BIRCH

Carload Rates Through to Chicago. Prices Right.

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Nursery Stock

Complete assortment of Fruit and Ornamental
stock in all varieties suited to northern culture. A
specialty of Hardy Shade Trees, Windbreak Stock,
Evergreens (Coniferous), Deciduous Shrubs, Apples,
and Native Plums.

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LAKE CITY, MINNESOTA

1200 Acres

Established 1868

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BOSKOOP (HOLLAND) NURSERY STOCK.

Rhododendrons, Hardy Azaleas, Pæonies, Roses, Boxwood, Koster Blue Spruce, Clematis, Hydrangea P. G., Magnolias, Evergreens, etc.

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Norway and Schwedler Maples, Chestnuts, Tiliac, Rivers Purple Beech, Planes, Thorns, Evergreens, etc.

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Spiræas, Weigelas, Syringas, Maples, Birch, Deutzia, Viburnum, etc. Small stock suitable for lining out.

JAPANESE NURSERY STOCK.

Jap. Maples, Sciadopitys, Thuya Obtusa, Jap. Iris, Azaleas, Kudzu Vines, Jap. Cherries, Tree Pæonies, etc.

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Rhododendrons, Gooseberries (Whinham Industry, etc.)

HERBACEOUS PLANTS AND PERENNIALS.

Phlox Decussata, Japan and German Iris, Aquatics, etc. from Royal Tottenham Nurseries, Deedemsvaart, Holland.

BAY TREES. Pyramids and Standards.

RAFFIA. Red Star Brand and 4 other grades. Bale lots only. Samples sent free. Several hundred bales always on hand.

WRITE US for catalogues, special lists, etc. on any of the above stock.

SHIPPING. We have our own Custom House Department. Special facilities at Havre, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock.

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Save Your \$ \$ \$

Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

We will also have our usual assortment of Fruits both large and small.

**Shades, Shrubs, Perennials
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Want Lists will receive immediate attention

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Walter Charles Slocock
GOLDSWORTH NURSERY
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HAS THE USUAL EXTENSIVE STOCK OF
THE FOLLOWING :

CONIFERS including a quantity of well shaped specimens for decorative purposes. Low prices can be quoted on all Conifers.

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ROSES, Standards, Dwarfs and others.

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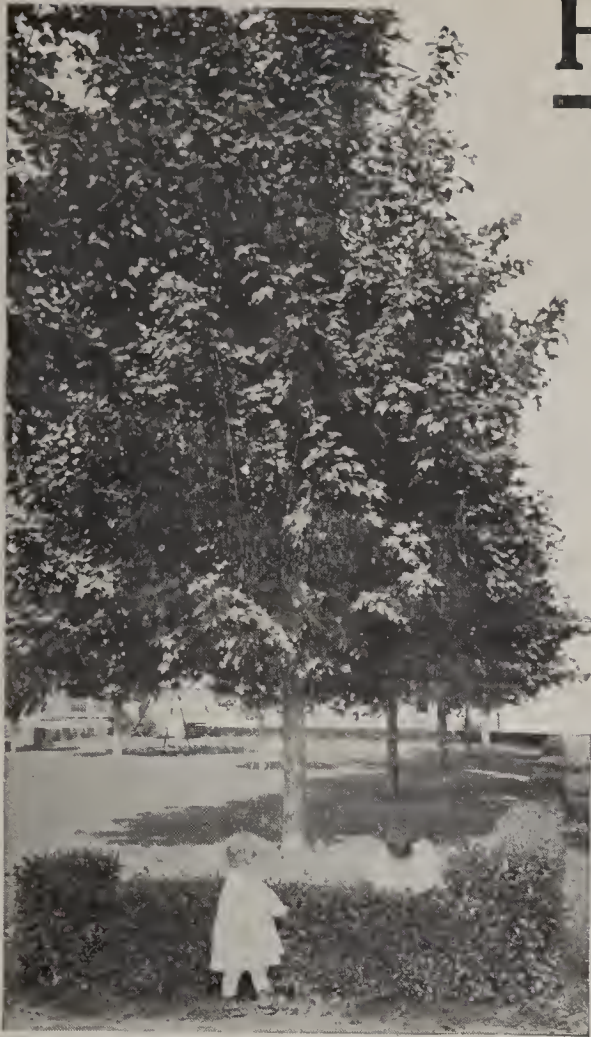
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(A good stock of all hardy varieties of Rhododendrons.)

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Transplanted **FOREST TREES.**

THE STOCK IS IN EXCELLENT CONDITION
LARGE QUANTITIES SHIPPED ANNUALLY



Harrison's Norway Maple—

A Distinctive Type

of Shade Tree



YOU know that the Norway Maple is among the top-notch leaders in the whole-list of deciduous trees—but do your customers know it as they should? Are you telling them well enough and often enough?

Suppose you were to let them know your stock of Norway Maple was strictly high class and strictly uniform—every tree a perfect beauty—and were then to impress on them the wonderful advantages of planting such trees; your sales of Norway Maples that year would establish a record for you.

You can make all this an easy possibility by getting your Norway Maples from Harrison's Nurseries this year.

We have the trees—50,000 Norway Maples alone, with more than that many other kinds of maples beside. They have been developed with such care that they're almost distinctive types in themselves. We don't crowd them, but give each tree plenty of room in the row and as a result every one of Harrison's Norway Maples is a perfect specimen tree. The illustrations show how they appear when planted in the lawn or along the drive.

Let us quote you on the beautiful Maples; our prices are right and their quality will delight you and your people alike.

Don't fail to ask us about them; but first, look over the following Surplus List, and see what we're offering this month; you'll be sure to find something there, too, that interests you!

SHADE TREES

100 Norway Maple - 2 in.	1000 Amer. Black Ash 8 to 10 ft.	500 Catalpa Speciosa 8 to 10 ft.	500 Amer. Elm - 8 to 10 ft.
1000 " " - 8 to 10 ft.	1000 " " " 6 to 8 ft.	1000 " " " 6 to 8 ft.	500 " " " 6 to 8 ft.
10000 " " - 6 to 8 ft.	1000 " " " 5 to 6 ft.	1000 " " " 5 to 6 ft.	500 " " " 5 to 6 ft.
50000 " " - 5 to 6 ft.	500 Box Elder - 2 in.	500 Russian Mulberry - 2 in.	1000 Carolina Poplar 8 to 10 ft.
3000 Silver " - 8 to 10 ft.	1000 " " " 8 to 10 ft.	1000 " " " 8 to 10 ft.	2000 " " " 6 to 8 ft.
5000 " " - 6 to 8 ft.	1000 " " " 6 to 8 ft.	1000 " " " 6 to 8 ft.	2000 " " " 5 to 6 ft.
5000 " " - 5 to 6 ft.	1000 " " " 5 to 6 ft.	1000 " " " 5 to 6 ft.	1000 Black Walnut - 4 to 5 ft.
100 Amer. Black Ash - 2 in.	500 Catalpa Speciosa - 2 in.	200 Amer. Elm - 2 in.	1000 " " " 2 to 3 ft.

HEDGE PLANTS AND EVERGREENS

5000 California Privet, 4 to 5 ft.	1200 Amer. Arborvitae 18 to 24 in.
25000 " " 3 to 4 ft.	100 Cal. Blue Spruce 3 to 4 ft.
100000 " " 2 to 3 ft.	100 " " " 2 to 3 ft.
100000 " " 18 to 24 in.	100 " " " 18 to 24 in.
50000 " " 12 to 18 in.	1000 " " " 12 to 18 in.
1000 Thunbergii Barberry, 18 to 24 in.	1000 Koster Blue " 18 to 24 in.
5000 " " 12 to 18 in.	1000 " " " 12 to 18 in.
100 Amer. Arborvitae 5 to 6 ft.	1000 Norway Spruce 3 to 4 ft.
100 " " 4 to 5 ft.	1500 " " 2 to 3 ft.
1200 " " 3 to 4 ft.	2000 " " 18 to 24 in.
1200 " " 2 to 3 ft.	10000 " " 12 to 18 in.



Harrison's
J.G. HARRISON & SONS, Props.
NURSERIES

BERLIN, MARYLAND

Designed and written by
The McFarland Publicity Service, Harrisburg, Pa.

W. F. HUMPHREY, PRINTER, GENEVA, N. Y.



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Established 1889.

Extensive Growers of Latuma
Orange and Magnolia Fig Trees

General Nursery Stock

Everything for the Southern
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We have been testing trees and plants in the Coast Country for the past twenty years, and offer only what we know from experience to be a success. We have a large bearing orchard, and cut our propagating wood only from selected trees in this bearing orchard.

ALL OUR TREES HAVE BEEN TRANSPLANTED
AND HAVE A GOOD ROOT SYSTEM.
CATALOGUE FREE.

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Evergreen Tree Seeds

Native seed of our own collection

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Well cleaned.

High germination per cent.

Fresh crop.

Prices right.

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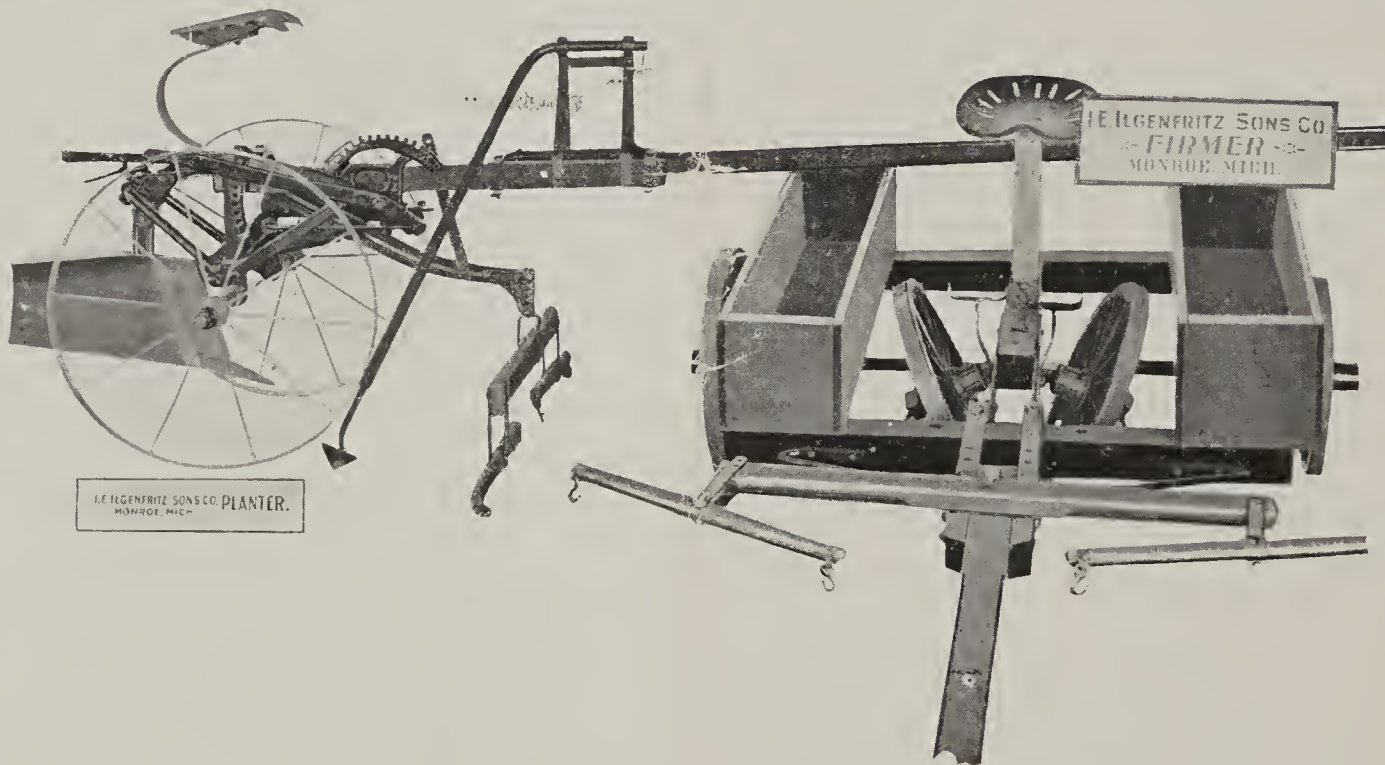
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Great
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and
More
Uniform
Stands
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Stocks,
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Cuttings
Etc.
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Take this matter up AT ONCE. Have machines for spring planting
ILGENFRITZ' SONS CO., The Monroe Nursery, Monr

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FRENCH ORNAMENTALS.

Spireas, Weigelias, Syringas, Maples, Birch, Deutzia, Viburnum, etc. Small stock suitable for lining out.

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McHUTCHISON & CO., 17 Murray St., New York

ST. REGIS EVERBEARING

The "Early 'till late" Raspberry

The most marvelous Raspberry of the age.

The earliest to ripen. The biggest, the best and the brightest red berries of all raspberries. The greatest yielder and the canes are as hardy as an oak tree.

Begins to ripen early in June and continues constantly until late Autumn.

Full particulars and attractive prices to the trade promptly given by mail.



J. T. LOVETT, Little Silver, New Jersey

TO THE TRADE

From date until shortly revised, we offer to the trade exceptionally handsome blocks. Car loads can be shipped from Louisiana, Mo., or from our several branch plants at Portland, N. Y., Dansville, N. Y., Perry, Ohio, Fayetteville, Ark., etc.

APPLE, two year and one year: Banana, Newtown, Spitzenburg, Stayman's Wine-sap, Jonathan, Grimes Golden, York Imperial, McIntosh, Alexandria, Rome Beauty Transcendent, etc.

CHERRY, two year and one year: The Montmorencies and other varieties as Bing, Lambert, Royal Ann, Tartarian, etc. The quality is unexcelled. Right prices on carload lots.

PEAR, standard and dwarf, including: Bartlett, Anjou, Lincoln, Comice, Easter Beurre, Howell, Seckel, Clapp, Flemish.

PEACH, Elberta, Muir, Lovell, Phillips, Crawford, Levy, etc.

APRICOT, can furnish by the car load; Blenheim, Royal, Tilton, Superb, Harris, Early May, Montgamet.

QUINCE: Bourgeat, Orange, Missouri Mammoth, Meech.

CURRENT: London Market, Pomona, White Grape, Red Cross, Wilder, Victoria, Prince Albert.

GOOSEBERRY: Houghton, Pearl, Smith, Downing, Mountain, Josselyn.

GRAPE: Moore Early, Campbell, Worden, Concord, Niagara, White Muscat, Black Cornichon, Thompson Seedless, Flame Tokay. Our grape nurseries are in the heart of the Chautauqua Grape Belt. We can furnish the quality in grape.

PLUM, BLACKBERRY, DEWBERRY, RASPBERRY, JAPAN PEAR SEEDLINGS, ETC.

NORWAY MAPLE: handsome trees.

ORNAMENTALS: A complete line, including a superb assortment of budded lilac, roses, etc.

Stark Bro's Nurseries & Orchards Co.

General Offices, Louisiana, Missouri, U. S. A.

Sixty Acres of Strawberry Plants— They MUST Be Sold this Spring

And you and your customers are going to help us move them!

With the tremendous advance of the strawberry-growing industry during the last few years, methods and varieties have been improved. Some of the old "good enough" sorts have been abandoned and new and more desirable ones introduced.

Your customers are keeping pretty well "read up" on these things—when they come to you for stock, they want the best there is to be had—

And *that's* why we are all the time hammering at you to supply them with Harrison's Plants!

We are Commercial Strawberry Growers ourselves; each season we ship hundreds of bushels of the finest berries to the big markets.

Thus we *test our new varieties* before we offer them for sale; if they fail to indicate merit, you can't buy

them of us—which means protection for you and your customers alike.

Our Strawberry List includes about forty varieties this season—you and your people can rely both on the varieties, and on the plants themselves. They are strong and vigorous and are dug from fresh, healthy, one year beds.

We have MILLIONS of them to sell, as the following list will show. But we are advertising them heavily, and they are moving rapidly already. If you want the best of the lot, drop us a line NOW for reservation of stock or for an estimate covering your needs for 1910.

And while you're writing, you'll find it a moment well spent to scan the List of Surplus Stock—you'll see a number of very attractive offers there, and we are always glad to furnish information and quote prices.

LIST OF SURPLUS STOCK

Strawberry Plants

125,000	Aroma	70,000	Crescent	2,100,000	Gandy	185,000	Millionaire	110,000	Senator Dunlap
75,000	Bismarck	140,000	Ekey	125,000	Glen Mary	140,000	Marshall	375,000	Sharpless
150,000	Bubach	95,000	Excelsior	550,000	Haverland	150,000	Nick Chmer	200,000	Star
40,000	Crimson Cluster	70,000	Early Hathaway	300,000	Klondike	125,000	Oak's Early	300,000	Superior
				140,000	Lady Thompson	500,000	Parson's Beauty	100,000	Tennessee

Ornamentals

	5-6	4-5	3-4	2-3	18-24	12-18
California Privet	5,000	10,000	15,000	10,000	10,000	10,000
Norway Spruce			500	500	1,000	1,000
Colo. Blue Spruce			100	100	100	1,000
American Arbor Vitae	100	100	200	200	200	
Barberry Thunbergii					1,000	5,000
	8-10 ft.	6-8 ft.	5-6 ft.			
Norway Maple	1,000	5,000	5,000			
Silver Maples	3,000	5,000	5,000			
Carolina Poplars	1,000	2,000	2,000			
American Elm	500	500	500			
Russian Mulberry	1,000	1,000	1,000			
Catalpa		1,000	1,000			
Amer. Black Ash.	1,000	1,000	1,000			
Box Elder	1,000	1,000	1,000			

In addition to the above, we have a very large supply of Grape, Cherry, Kieffer Pear, Peach, Apple, Plum, Asparagus, etc., and invite inquiries from all who are interested in the purchase of such stock.

Harrison's
J.G.HARRISON & SONS, Props.
NURSERIES

BERLIN, MARYLAND

Designed and Written by The McFarland
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April Shipment from Belgium

STANDARDS. Crowns from 18 inches to 6 feet diameter.

PYRAMIDS. From 4 to 16 feet high.

HALF STANDARDS. From 18 to 40 in. crown.
Imperial shape, Club Tops, etc.

Trees are shipped in strong, original Tubs.
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For delivery as required (800 bales at present in stock.) Bale lots only.

RED STAR BRAND.

ARROW BRAND.

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BS “ “ “

Samples sent when grade and quantity required is mentioned.

Order now for June delivery.

Write us now for special quotations

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The “Early 'till late” Raspberry

The most marvelous Raspberry of the age.

The earliest to ripen. The biggest, the best and the brightest red berries of all raspberries. The greatest yielder and the canes are as hardy as an oak tree.

Begins to ripen early in June and continues constantly until late Autumn.

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PEACH, Elberta, Muir, Lovell, Phillips, Crawford, Levy, etc.

APRICOT, can furnish by the carload; Blenheim, Royal, Tilton, Superb, Harris, Early May, Montgamet.

QUINCE: Bourgeat, Orange, Missouri Mammoth, Meech.

CURRENT: London Market, Pomona, White Grape, Red Cross, Wilder, Victoria, Prince Albert.

GOOSEBERRY: Houghton, Pearl, Smith, Downing, Mountain, Josselyn.

GRAPE: Moore Early, Campbell, Worden, Concord, Niagara, White Muscat, Black Cornichon, Thompson Seedless, Flame Tokay. Our grape nurseries are in the heart of the Chautauqua Grape Belt. We can furnish the quality in grape.

PLUM, BLACKBERRY, DEWBERRY, RASPBERRY, JAPAN PEAR SEEDLINGS, ETC.

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California Privet Like
This Will Increase Your
Business and Please
Your Customers.

We Grow Square Miles
of it--Splendid Plants, all
Sizes, By the Hundred
Thousand.



Your Customers Would Be Glad to Get California Privet Like This



Your customers will plant a lot of California Privet this spring; naturally they will want the best that can be had. You cannot please them better than to furnish them with Privet from Harrison's—the kind illustrated above, with plenty of good roots, strong, well-branched tops, and the sturdy vitality that comes from long and careful tending, by skilled growers.

We want you to know more about it. Drop us a line, say how much you will probably need, and we'll gladly name an interesting figure. Even if you are now inclined to purchase elsewhere, give us a chance to show you how good our California Privet is, and incidentally how reasonable our prices—considering the quality of the stock!

Mention the following in your inquiry, and we'll name special prices: GRAPE, Concord and Moore's Early; 1 year. PEAR, Bartlett and Kieffer. STRAWBERRY, 10,000,000 PLANTS, more than forty leading standard varieties—including Gandy, Senator Dunlap, etc. ASPARAGUS, Giant Argenteuil, Barr's Mammoth, Conover's, Palmetto.

Glad to quote on any of these, but before you write us, look over the following list—you'll want some of that stock, too:

Hedge Plants and Evergreens

5000 California Privet,	4 to 5 ft.	1200 American Arborvitae,	18 to 24 in.
25000 " "	3 to 4 ft.	100 Colorado Blue Spruce,	3 to 4 ft.
100000 " "	2 to 3 ft.	100 " "	2 to 3 ft.
100000 " "	18 to 24 in.	100 " "	18 to 24 in.
50000 " "	12 to 18 in.	1000 " "	12 to 18 in.
1000 Thunbergii Barberry,	18 to 24 in.	1000 Koster Blue Spruce,	18 to 24 in.
5000 " "	12 to 18 in.	1000 " "	12 to 18 in.
100 American Arborvitae	5 to 6 ft.	1000 Norway Spruce	3 to 4 ft.
100 " "	4 to 5 ft.	1500 " "	2 to 3 ft.
1200 " "	3 to 4 ft.	2000 " "	18 to 24 in.
1200 " "	2 to 3 ft.	10000 " "	12 to 18 in.

Shade Trees

100 Norway Maple - 2 in.	500 Box Elder - 2 in.	200 Amer. Elm - 2 in.
1000 " " 8 to 10 ft.	1000 Box Elder - 8 to 10 ft.	500 " " 8 to 10 ft.
10000 " " 6 to 8 ft.	1000 " " 6 to 8 ft.	500 " " 6 to 8 ft.
50000 " " 5 to 6 ft.	1000 " " 5 to 6 ft.	500 " " 5 to 6 ft.
3000 Silver " 8 to 10 ft.	500 Catalpa Speciosa - 2 in.	1000 Carolina Poplar 8 to 10 ft.
5000 " " 6 to 8 ft.	500 " " 8 to 10 ft.	2000 " " 6 to 8 ft.
5000 Silver Maple 5 to 6 ft.	1000 " " 6 to 8 ft.	2000 " " 5 to 6 ft.
100 Amer. Black Ash 2 in.	500 Russian Mulberry 2 in.	1000 Black Walnut 4 to 5 ft.
1000 " " Ash 8 to 10 ft.	1000 " " 8 to 10 ft.	1000 " " 2 to 3 ft.
1000 " " 6 to 8 ft.	1000 " " 6 to 8 ft.	
1000 " " 5 to 6 ft.	1000 " " 5 to 6 ft.	



Harrison's Nurseries
J. G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.

W. F. HUMPHREY, PRINTER, GENEVA, N. Y.



THE NATIONAL NURSERYMAN



APRIL, 1910

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI
by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

OREGON GROWN

ROSES

OWN ROOTS

Baltimore Belle Crimson Rambler
Dorothy Perkins Seven Sisters
Queen of the Prairie

CUT-LEAF WEEPING BIRCH

Carload Rates Through to Chicago. Prices Right.

Oregon Nursery Co., SALEM,
ORE.

MINNESOTA

Nursery Stock

Complete assortment of Fruit and Ornamental
stock in all varieties suited to northern culture. A
specialty of Hardy Shade Trees, Windbreak Stock,
Evergreens (Coniferous), Deciduous Shrubs, Apples,
and Native Plums.

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1200 Acres

Established 1868

DIRECT IMPORTATIONS

McHUTCHISON & CO.

BAY TREES

April Shipment from Belgium

STANDARDS. Crowns from 18 inches to 6 feet diameter.

PYRAMIDS. From 4 to 16 feet high.

HALF STANDARDS. From 18 to 40 in. crown.
Imperial shape, Club Tops, Bush Shape, etc.

Trees are shipped in strong, original Tubs.
Prices quoted at Nurseries, Belgium, or
F. O. B. Cars, New York.

R A F F I A

For delivery as required (800 bales at present in stock.) Bale lots only.

RED STAR BRAND.

ARROW BRAND.

AA WEST COAST BRAND.

BS “ “ “

Samples sent when grade and quantity required is mentioned.

Order now for June delivery.

Write us now for special quotations

McHUTCHISON & CO., 17 Murray Street, New York City

Largest Grower in America of

Grape Vines

Other Specialties
Currants and Gooseberries

Introducer of Campbell's Early Grape, Josselyn
Gooseberry, Fay Currant.

Over thirty years with no change whatever
in ownership or management.

Our main business is the growing of unusually high grade stock suitable for the proper filling of Nurseyman's Retail Orders. There being no standard for grading above kinds of stock, every grower of the same is at perfect liberty to adopt his own ideas for growing and grading and alter the same as often as he sees fit.

Our stock this season has made very heavy growth and we have ordered extra boxing to meet this necessity. Box and packing free.

Prices reasonable, but not always lower than are generally quoted for light rooted stock.

Please send us your list of wants.

George S. Josselyn,

Fredonia, New York.

California Privet Hedge Plants . .

is our specialty. We grow them by the millions for the wholesale trade in all sizes from 6 inches up to 3 feet.

Let us have your want list to price before you order elsewhere. We can save you money on your Spring orders.

THE LANCASTER COUNTY NURSERIES

DAVID S. HERR, Proprietor

R. F. D. No. 7

LANCASTER, PENNA.

WANTED-- We want to revise our mailing list and if your name is not already on our new list send us your name and address and we will mail you our price lists for the next five years. Do this at once if you want our regular price lists.

Fungous Diseases of Plants

By BENJAMIN MINGE DUGGAR

Professor of Plant Physiology in Cornell University

This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated.

\$2.40. Trade Edition.

Sent on receipt of price by

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218 Livingston Bldg., Rochester, N. Y.

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SPRUCE
PINES
FIRS
CEDARS

ARBOR VITAE
HEMLOCKS
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YEW

FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
BLACK LOCUST
MAPLES
OAKS
LINDENS
BEECH
CHESTNUT

ASH
WALNUT
ELM
BOX ELDER
BIRCH
EUROP. LARCH
WILD BLACK CHERRY

*Advance Price List of Evergreen and Forest Tree Seedlings
now Ready*

D. HILL

EVERGREEN SPECIALIST

DUNDEE, ILLINOIS

Save Your \$ \$ \$

Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

We will also have our usual assortment of Fruits both large and small.

Shades, Shrubs, Perennials and Forest Tree Seedlings

Want Lists will receive immediate attention

C. M. Hobbs & Sons

BRIDGEPORT, IND.

Nursery Stock

Walter Charles Slocock

GOLDSWORTH NURSERY

WOKING, SURREY, Eng.

HAS THE USUAL EXTENSIVE STOCK OF
THE FOLLOWING :

CONIFERS including a quantity of well shaped specimens for decorative purposes. Low prices can be quoted on all Conifers.

HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES.

ROSES, Standards, Dwarfs and others.

MANETTI and other **ROSE STOCKS**.

FRUIT TREES in large quantities.

Transplanted **FRUIT TREE STOCKS**.

RHODODENDRONS and other **AMERICAN PLANTS**.

(A good stock of all hardy varieties of Rhododendrons.)

CLEMATIS and other **HARDY CLIMBING PLANTS**.

Transplanted **FOREST TREES**.

THE STOCK IS IN EXCELLENT CONDITION
LARGE QUANTITIES SHIPPED ANNUALLY



Grapes Like These Can Command a Market Almost Anywhere.

Our Strawberry plants—we started with 10,000,000 this year—were never better, while our Grapes are fine and vigorous and make an excellent showing. We offer both Grapes and Strawberries in the leading varieties; they will please you and your customers alike. We're equally proud, and so will *you* be—of our stock of Apple, Plum, and Peach; be sure to get our prices on these, and the other things we offer, before you buy.

Here's just a hint of what we're offering: drop us a line and get in touch with us NOW, before somebody else goes in ahead of you and the stock is picked over. We don't want anybody disappointed, but there isn't enough to supply everyone!

SURPLUS LIST--PLANTS AND TREES

STRAWBERRY PLANTS

75,000 Auto	95,000 Excelsior	60,000 Johnson Early	125,000 Oswego
125,000 Aroma	70,000 E. Hathaway	300,000 Klondike	125,000 Oaks Early
38,000 Beder Wood	25,000 Fairfield	140,000 L. Thompson	500,000 Parsons
75,000 Bismark	50,000 Fendall	185,000 Millionaire	110,000 Senat. Dunlap
40,000 C. Cluster	2,000,000 Gandy	140,000 Marshall	375,000 Sharpless
70,000 Crescent	125,000 Glen Mary	150,000 Nick Ohmer	200,000 Star
140,000 Ekey	550,000 Haverland	40,000 New Home	300,000 Superior
38,000 Sample	100,000 Tennessee		

CALIFORNIA PRIVET

3 to 4 ft.	2 to 3 ft.	18 to 24 in.	12 to 18 in.	8 to 10 ft.	6 to 8 ft.	5 to 6 ft.
20,000	20,000	20,000	20,000	Am. Blk. Ash 1000	1000	1000
				Am'can Elm 500	500	500
				Box Elder 1000	1000	1000
				Car. Poplar 1000	2000	2000
				Catalpa 1000	1000	1000
				Norway Maple 1000	5000	5000
				Silver Maple 3000	5000	5000
				Rus. Mulberry 1000	1000	1000
				Rhododendron	Azalea	Baby Rambler

SHADE TREES	3 to 4 ft.	2 to 3 ft.	18 to 24 in.
Norway Spruce	500	1000	1000
Col. Bl. Spruce	100	100	1000
Koster's B. Spr.			1000
Am. Arborvitae	100	500	2000



Strawberries as We Grow Them on our Home Grounds

Your Customers Can Make Money Growing Grapes and Strawberries

YOU know that the demand for real first class fruit is growing away ahead of the supply—the city markets are crying for more than they can get. Your customers are learning that fruit-growing is a mighty profitable means of making a living—ahead of many other kinds of farming—and somebody is going to sell them lots of trees from now on.

We are spending thousands of dollars in educating the public to buy and plant trees of real quality, such as we grow and furnish.



An Attractive and Pleasing Method of Combining Usefulness and Beauty—Grape Vine Trained over an Arch.

FRUIT TREES

	$\frac{3}{4}$ in.	5-8 in.	$\frac{1}{2}$ in.	3 to 4 ft.	2 to 3 ft.	
Bartlett Pear	780		5000	3000	2000	
Early Richmond	800	3000	3500	1800	2000	
Montmorency		800	1400	1000	1000	
Black Tartarian	2000					
	1 in.	$\frac{3}{4}$ in.	5-8 in.	$\frac{1}{2}$ in.	3 to 4 ft.	2 to 3 ft.
Aban'ce Plum			1000	2000	2000	500
Burbank			1000	2000	2000	500
Red June			2000	3000	3000	1000
Wickson			3000	3000	2000	1000

SPECIAL NOTE—Our stock of Apple includes all leading varieties, of which the above list is but a small part. We also have a limited stock of first-class Peach, and shall be pleased to furnish prices on either, or both, upon request.

Harrison's Nurseries
J.G. HARRISON & SONS
BERLIN PROPRIETORS
MARYLAND

Designed and written by

The McFarland Publicity Service, Harrisburg, Pa.



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and Native Plums.

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1200 Acres

Established 1868

DIRECT IMPORTATIONS

McHUTCHISON & CO.

FRUIT STOCKS

offered for account of Vincent Lebreton's Nurseries, Angers, France, the well known shippers of the best selected and Graded French Nursery Stock

Send your list of requirements now for special quotations.

RAFFIA

Budding season is near—Why not order now while the prices are "RIGHT?"
We are direct importers of the famous "RED STAR BRAND" which is fully guaranteed.
You can't go wrong in buying this Raffia.

Bale Lots only.—Write for Special Prices.—Sample on request.

McHUTCHISON & CO., 17 Murray Street, New York City

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil
climate and expert knowledge.

Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

H. M. Simpson & Sons,
Vincennes, Indiana

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
ata; Norway Maple; Silver Maple; Car. Poplars under
1 $\frac{1}{2}$ inch.

A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

WANTED-- Two nurserymen who are honest and industrious; wages \$2.50 per day. Steady employment and advancement if satisfactory.

DEVILS LAKE NURSERY
Devils Lake, N. Dak.

The New England Nurseries, Inc.
BEDFORD, MASS.

HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
HERBACEOUS PERENNIALS

We grow everything required for Orchard, Garden,
Lawn and Landscape Planting.

Catalog and Trade-list on application.

F. J. Grootendorst & Sons
BOSKOOP, HOLLAND

Azaleas, Rhododendrons, Clematis, Roses, Pot-grown
Plants for forcing. Buxus, Conifers, Japanese
Maples, Shrubs, Palms, Bulbs, Etc.

A postal brings our catalogue

Address until June 10th:

MR. C. GROOTENDORST
Care of Messrs. P. C. Kuyper & Co.
10-12 Broadway, New York, N. Y.

Cyclopedia of American Horticulture

L. H. BAILEY

IN FOUR VOLUMES

The NATIONAL NURSERYMAN has made special arrangements with the publishers of this great work and now offers it to Nurserymen on *special easy monthly terms*, \$2.00 per month for ten months. The work shipped by express prepaid on receipt of first installment and coupon below filled out.

Practical instructions on every subject connected with Horticulture. Four handsome quarto volumes; 2,800 original engravings, 50 full plates; 2,016 pages and 4,357 articles; Total plants accounted for 24,434.

Fill out this coupon and mail with first payment:

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National Nurseryman,
Rochester, N. Y.

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Please enter my name as a subscriber for the new CYCLOPEDIA OF AMERICAN HORTICULTURE to be sent to me, charges prepaid, complete in four illustrated volumes, bound in green cloth. I inclose \$2 and agree to pay \$2 monthly for nine months after delivery until \$20 is paid.

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218 Livingston Building

Rochester, N. Y.

To Destroy Aphis and Thrips

WITHOUT INJURY TO FOLIAGE
SPRAY WITH

“BLACKLEAF”
TOBACCO EXTRACT

LISTEN TO THESE

ROGUE RIVER (OREGON) FRUIT GROWERS' UNION: “Black Leaf” does not burn nor injure the foliage or the fruit and will eradicate the aphis immediately.

DELTA COUNTY (COLO.) FRUIT GROWERS' ASS'N: “Black Leaf” is the best remedy we have ever found for plant lice on fruit trees.

PROF. GILLETTE, of the COLORADO Exp. Station: We have found “Black Leaf” very satisfactory indeed.

HOOD RIVER (OREGON) APPLE GROWERS' UNION: We are satisfied “Black Leaf” is going to take the place of all other aphis sprays in this section.

MR. A. N. JUDD, Watsonville, Cal.: For all plant lice, and green and black aphis, “Black Leaf” Tobacco Extract is the most gratifying of all washes.

PRICE: In 5-gal. jacket cans, 85c per gal.; in 1-gal. cans, \$1; f. o. b. Louisville, Ky. The usual Western price is 90c to 95c per gal. in 5-gal cans, owing to increased freight.

USUAL DILUTION: For Green and Woolly Aphis, and Black Peach Aphis, 1 gal. “Black Leaf” in 65 or 75 gals. water. For Thrips, 1 to 50 or 60.

TO SAVE YOU FREIGHT: Write us for name of agent nearest you

The Kentucky Tobacco Product Co., Inc.
LOUISVILLE, KENTUCKY

NURSERYMEN!

We Carry a Large Stock of

BURLAPS

and can supply your requirements promptly

AT THE LOWEST PRICE

on the market, and can make prompt delivery.

WRITE FOR PRICES.

LANDERS BROS. CO.,

TOLEDO, O.



We're Always at Your Service with Stock That Your Customers Want—When They Want It

Here are just a couple of the seasonable things we tell you about from time to time—your customers want these and will soon be asking you about them. It's one of our hobbies to be *always ready* with these things whenever they are needed—to be able to supply you with stuff early enough so that your trade can get it in the ground at the right time.

"Evergreens" is a subject that is interesting a lot of your people just about now, and you'll find it decidedly to your advantage to get them interested to the extent of buying of *you*. It makes a lot of difference where you get the stock with which you supply them—if you get it from Harrison's, you'll be pleased, and your trade will, too!

The above plant of Arbor Vitæ isn't a "specimen" in the sense of being picked out for its exceptional attractiveness, but is a good, fair average of the Arbor Vitæs we grow here at Berlin.

Our soil and climate are just right for growing evergreens, and we are willing to take the pains necessary to produce handsome, thrifty trees. The following surplus list tells about the various kinds we offer this spring—as well as an equally attractive lot of trees and plants of many varieties, priced so low they can't last long.

"When They Want It" means as much, or more, to purchasers of nursery stock than to any other class of buyers—for unless the stuff is on hand when needed, it's of little use. The "order end" of our plant is arranged with the special view to getting shipments out on time.

And of all the seasonable things we'd like to ship you right now, there's nothing more attractive than our splendid Strawberry plants—many acres of them—of which we offer several leading standard varieties.

Strawberries are going to bring high prices this year, and this fact will induce more and more of your customers to plant their own beds. If they get the right start, and *succeed*, they will buy more plants—and more trees, shrubs, etc., as well.

YOU are the one to supply them with plants for the start; sell them Harrison's Strawberry Plants, and they are *bound* to succeed. Our plants are strong, vigorous, well-rooted, well-grown; they're cheap at the price we quote because of their superior quality. Read the following list and let us know your wants; upon request we'll send our complete surplus list for the current month with prices, and will gladly tell you whatever you want to know about our stock.

SURPLUS LIST FOR MAY, 1910

STRAWBERRY PLANTS—In good shape can be shipped promptly.

10,000 Crescent	50,000 Oaks' Early
20,000 Excelsior	500,000 Parsons
20,000 Early Hathaway	50,000 Senator Dunlap
900,000 Gandy	90,000 Star
200,000 Haverland	100,000 Superior
125,000 Klondike	150,000 Warfield
200,000 Millionaire	90,000 Sharpless
10,000 Nick Ohmer	
2,000 Norway Spruce—4, 3, 2 ft. high	
2,000 American Arbor Vitæ—4, 3, 2 ft. high	
1,000 Colorado Blue Spruce—3, 2, 1 ft. high	
1,000 Koster's Blue Spruce—2, 1 ½, 1 ft. high	
1,000 Rhododendrons - Extra	
1,000 Azaleas	

1,000 Baby Rambler Roses—2 years Standard and Half Dwarf Bay trees

APPLES—In good condition

	1 in.	¾	½	¼
Ben Davis		200	200	300
Chenango	150			
Gano		200	100	1000
Early Harvest		250	200	
Grimes Golden		1300	600	
M. B. Twig	30	450		
Nero	200	1000	500	
Northwestern Greening			400	800
Red Astrachan			4000	2400
Red June		500	200	
Stark	200	200	500	
Winesap	200	2000	300	

	1 in.	¾	½	¼
Williams Early, Red	500	500		
Yellow Transparent	1000	300		
1000 Peach ¾-6 ft.—Good Varieties—Clings				
PEARS—Kieffer,	1000	3000	2000	2000
PLUMS—Wickson	300			
—Red June				200
CHERRIES—Early Richmond			2000	1000
GRAPE				
Moore's Early, 1,000 2yr.	Concord,	5,000	2 yr.	
" " 20,000 1 yr.	"	50,000	1 yr.	
CALIFORNIA PRIVET				
Can be dug and shipped till June 1st				
3-4 ft.	2-3 ft.	18-24 inches		
10,000	20,000	10,000		

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Bale Lots only.—Write for Special Prices.—Sample on request.

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is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil
climate and expert knowledge.

Take a look at the stock or ask for a
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LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

Fungous Diseases of Plants

By BENJAMIN MINGE DUGGAR

Professor of Plant Physiology in Cornell University

This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated.

\$2.40. Trade Edition.

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THE NATIONAL NURSEYMAN

218 Livingston Bldg., Rochester, N. Y.

EVERGREENS

LARGE STOCK, BOTH SEEDLINGS AND TRANS-PLANTS, OF

SPRUCE
PINES
FIRS
CEDARS

ARBOR VITAE
HEMLOCKS
JUNIPERS
YEW

FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
BLACK LOCUST
MAPLES
OAKS
LINDENS
BEECH
CHESTNUT

ASH
WALNUT
ELM
BOX ELDER
BIRCH
EUROP. LARCH
WILD BLACK CHERRY

*Advance Price List of Evergreen and Forest Tree Seedlings
now Ready*

D. HILL

EVERGREEN SPECIALIST

DUNDEE, ILLINOIS

Save Your \$ \$ \$

Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

We will also have our usual assortment of Fruits both large and small.

Shades, Shrubs, Perennials and Forest Tree Seedlings

Want Lists will receive immediate attention

C. M. Hobbs & Sons

BRIDGEPORT, IND.

Nursery Stock

Walter Charles Slocock

GOLDSWORTH NURSERY

WOKING, SURREY, Eng.

HAS THE USUAL EXTENSIVE STOCK OF
THE FOLLOWING:

CONIFERS including a quantity of well shaped specimens for decorative purposes. Low prices can be quoted on all Conifers.

HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES.

ROSES, Standards, Dwarfs and others.

MANETTI and other ROSE STOCKS.

FRUIT TREES in large quantities.

Transplanted FRUIT TREE STOCKS.

RHODODENDRONS and other AMERICAN PLANTS.

(A good stock of all hardy varieties of Rhododendrons.)

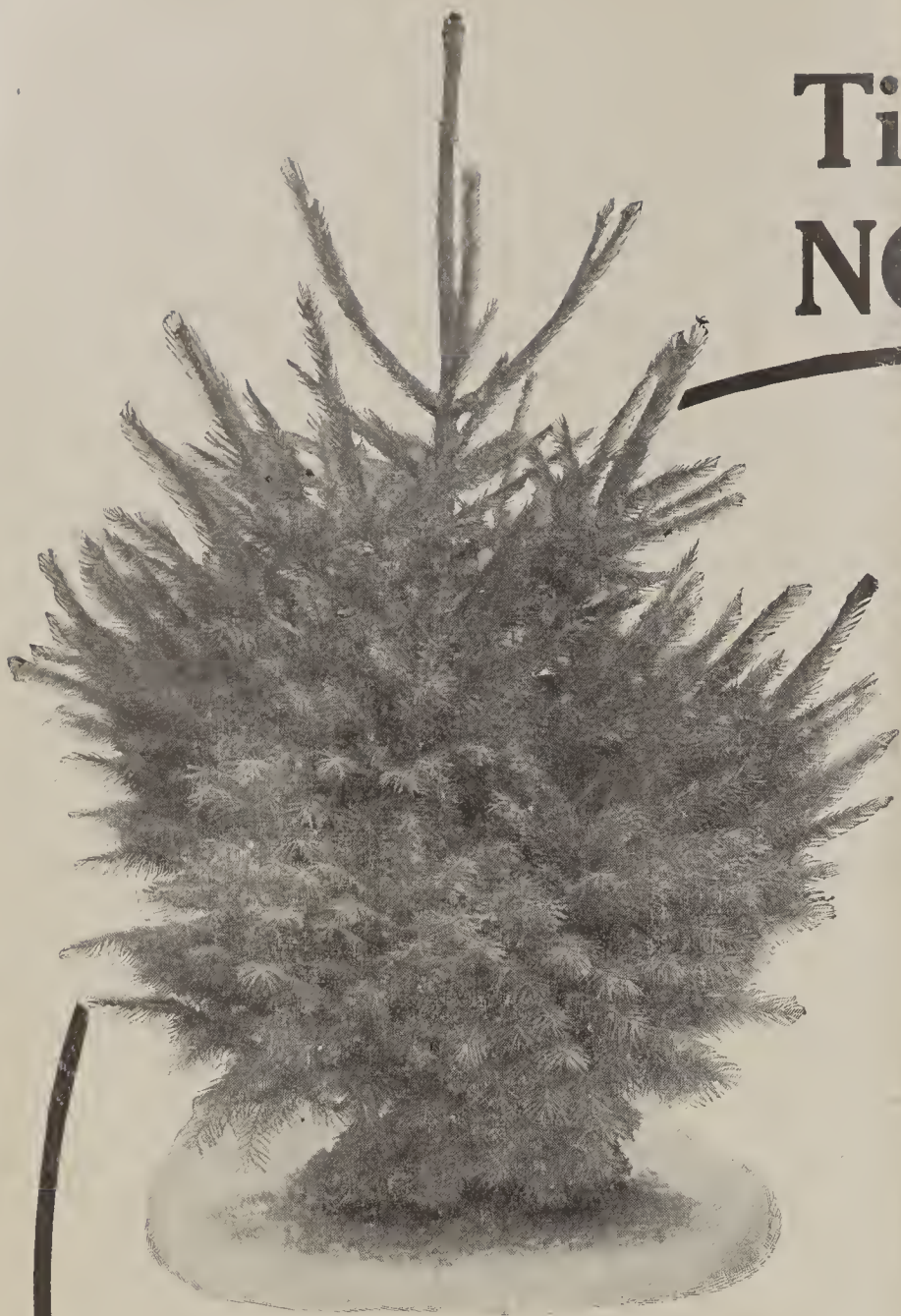
CLEMATIS and other HARDY CLIMBING PLANTS.

Transplanted FOREST TREES.

THE STOCK IS IN EXCELLENT CONDITION
LARGE QUANTITIES SHIPPED ANNUALLY

Time to Get Busy on NORWAY SPRUCE

—We're Ready
NOW



Your customers who want to plant Norway Spruce this Fall—and a lot of them are thinking seriously of it—will soon be after you to supply them with stock. This is a word to YOU to get in line and be ready to supply them with the sort of trees that will please them, and help you build up more business.

Year by year the Norway Spruce is becoming more popular. Its symmetrical form and the bright, attractive color of its foliage, commend it to every planter; it grows to a large size and lives much longer than most other evergreens.

These desirable features make it a tree of exceptional worth. In addition to its pleasing appearance, the Norway Spruce is becoming more and more appreciated for its practical uses—shelter belts, windbreaks, etc.—for which its dense growth makes it particularly suitable.

The house sheltered by Norway Spruces suffers less damage from exposure to wind, sun and storm; it is cooler in summer and warmer in winter, and the investment pays handsome returns in comfort and satisfaction, as well as in money saved on fuel, repairs and paint.

Such protection is of equal benefit to farm buildings; and crops grown in fields shielded by Norway Spruce on the windward side, almost always are earlier and less liable to damage by windstorms, late frosts, etc.

We have acres and acres of magnificent Norway Spruces like the tree we show here—fine, shapely trees, with good roots and plenty of vitality to keep them growing after transplanting. Our stock is part of a splendid collection made in Europe by our

Mr. Orlando Harrison.

It is the kind of stock you will be proud to supply your trade—and that they will be mighty glad to have. We'd like to tell you more about it, and to quote prices.

Herewith we list part of our enormous Surplus Stock for next Fall. This is stock that you can use—that your customers want and will buy. It's up to the usual high standard of

"HARRISON
QUALITY."

We'd like to send you a copy of the complete list—it's free—with prices. A postal card, bearing your name, will bring it to you by return mail.

Surplus List for Fall, 1910.

700,000 One Year Peaches.

CALIFORNIA PRIVET.

50,000...1 to 2 feet. 50,000...18 to 24 in.
50,000...2 to 3 ft. 50,000...3 to 4 ft.
20,000...4 to 5 ft. 10,000...5 to 6 ft.
500,000 Apple...1 year buds, 5 to 6 ft.
500,000 "....1 year grafts, 3 to 5 ft.
100,000 "....2 year buds, $\frac{3}{4}$ and up.
50,000 Keiffer Pear, 2 Year, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1 in.
50,000 "....1 Year, 4 to 5 ft.
10,000 Bartlett, 2 Year, $\frac{3}{4}$ and up.
5,000 "....2 Year, $\frac{3}{8}$ and $\frac{3}{4}$.
30,000 Cherry, Sweet and Sour, leading varieties,
 $\frac{3}{8}$ and $\frac{3}{4}$ in., 2 yr.
20,000 Cherry, Sweet and Sour, in 1 yr.
10,000 Plum, 2 yr., $\frac{3}{4}$ and inch in the following
varieties: Red June, Abundance, Burbank
and Wickson.
2,000 Quince.
100,000 Asparagus, 2 yr.
200,000 Asparagus, 1 yr.
Norway Spruce—1,000...6 ft., 2,000...5 ft.,
3,000...4 ft. 4,000...3 ft. 5,000...2 ft.
Koster's Blue Spruce—1,000...12 to 15 in.
1,000...18 to 24 in.

Colorado Blue Spruce—1,000...12 to 15 inch.
100...2 ft. 50...3 ft. 20...4 ft.

American Arbor Vitae—1,000...2 ft. 300...3 ft.
300...4 ft. 300...5 ft.

Norway Maple—1,000...2 in. 2,000...1 $\frac{1}{2}$ in.
3,000...1 $\frac{1}{4}$ in. 5,000...1 in. 10,000
 $\frac{3}{4}$ in.

Silver Maple—1,000...2 in. 5,000...1 $\frac{1}{2}$ in.
3,000...1 $\frac{1}{4}$ in. 5,000...1 in. 10,000
 $\frac{3}{4}$ in.

Box Elder—1,000...2 in.

American Black Ash—1,000...1 $\frac{1}{4}$ in.

Carolina Poplar—1,000...1 $\frac{1}{4}$ in.

American Linden—1,000...1 in.

American Elm—1,000...1 in.

Blue Cedar—1,000...2 ft.

Baby Rambler Rose—5,000...3 yr.

Rhododendrons—Azaleas, Bay Trees, Barberry
Thunbergii, Hemlock Spruce.

GRAPES

90,000 Concord, 2 year, transplanted.

90,000 "....1 year.

30,000 Moores' Early, 2 year, transplanted.

Harrison's
J.G. HARRISON & SONS, Props.
NURSERIES

BERLIN, MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.

SEE OUR MR. ORLANDO HARRISON AT DENVER.

Our Mr. Orlando Harrison will be in attendance at the Convention of the American Association of Nurserymen at Denver. He will be glad to talk to you about Fruit Trees, Shade Trees, Etc.

Look him up!

Look for Badge No. 2.

W. F. HUMPHREY, PRINTER, GENEVA, N. Y.

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THE NATIONAL NURSERYMAN



JULY, 1910

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI
by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

OREGON GROWN

ROSES

OWN ROOTS

Baltimore Belle Crimson Rambler
Dorothy Perkins Seven Sisters
Queen of the Prairie

CUT-LEAF WEEPING BIRCH

Carload Rates Through to Chicago. Prices Right.

Oregon Nursery Co.,

ORENCO,
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MINNESOTA

Nursery Stock

Complete assortment of Fruit and Ornamental
stock in all varieties suited to northern culture. A
specialty of Hardy Shade Trees, Windbreak Stock,
Evergreens (Coniferous), Deciduous Shrubs, Apples,
and Native Plums.

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1200 Acres

Established 1868

DIRECT IMPORTATIONS

McHUTCHISON & COMPANY

We are offering for FALL and SPRING delivery
BOSKOOP (HOLLAND) NURSERY STOCK.

Rhododendrons, Hardy Azaleas, Pæonies, Roses, Boxwood, Koster Blue Spruce, Clematis, Hydrangea P. G., Magnolias, Evergreens, etc.

OUDENBOSCH (HOLLAND) STOCK.

Norway and Schwedler Maples, Chestnuts, Tiliac, Rivers Purple Beech, Planes, Thorns, Evergreens, etc.

FRENCH ORNAMENTALS.

Spireas, Weigelias Syringas, Maples, Birch, Deutzia, Viburnum, etc. Small stock suitable for lining out.

JAPANESE NURSERY STOCK.

Jap. Maples, Sciadopitys, Thuya Obtusa, Jap. Iris, Azaleas, Kudzu Vines, Jap Cherries, Tree Pæonies, etc.

FROM ENGLAND.

Rhododendrons, Gooseberries (Whinham Industry, etc.), Trained Fruit Trees, Manetti Stocks, etc.

HERBACEOUS PLANTS AND PERENNIALS.

Phlox Decussata, Japan and German Iris, Aquatics, etc. from Royal Tottenham Nurseries, Deedemsvaart, Holland.

BAY TREES. Pyramids and Standards.

RAFFIA. Red Star Brand and 3 other grades. Bale lots only. Samples sent free. Several hundred bales always on hand.

WRITE US for catalogues, special lists, etc., on any of the above stock.

SHIPPING. We have our own Custom House Department. Special facilities at Harvrie, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock.

McHUTCHISON & CO., 17 Murray Street, New York City

North Carolina Peach Pits

THE BEST KIND

We are situated in the best section of the country for buying the small, natural Peach Pits, and are in a position to offer them in car loads or less. We guarantee our stock to be as represented. Have a quantity of 1909 stock to offer. Write us for prices.

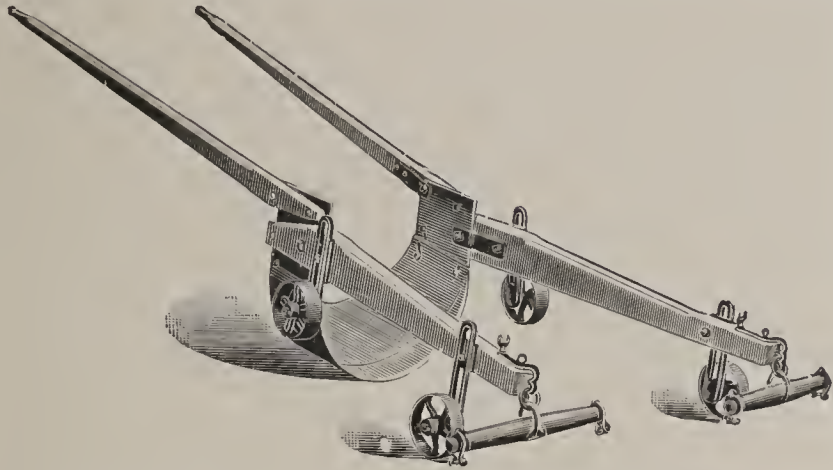
Morrison Produce and Provision Co.

STATESVILLE, N. C.

1857-1910

BRAGG'S COMMON SENSE TREE DIGGER

Repairs always on hand. Send for Catalogue



Digger gets all the roots at the rate of 20 to 40 thousand trees per day, and only needs same power as a plow.

L. G. BRAGG & CO.
KALAMAZOO, MICH.

Hardy Upland Grown Trees

(CLIMATIC conditions and suitable soil enables us to produce exactly the quality trees required for building up a solid class of well satisfied patrons.



Having over Two Hundred acres of Nursery, we are prepared to offer a large assortment of the following strictly Two Year Stock, except as otherwise noted:

European and Japan Plums,
Sweet and Sour Cherry,
Standard and Dwarf Pears,
Standard Apple Grafts, 3 years old,
One Year Quince, and Japan Plums,

CHERRIES OUR SPECIALTY

Our root system is the finest in the United States. Patrons say our trees make business easy. Why not mail us your want list to be priced? Better still, come and see us, when we will gladly show you through our nurseries, and endeavor to name you attractive quotations.

Remember, no one sends out a better grade of trees than we. Each and every order entrusted with us, merits the personal attention of a member of our firm, thereby guaranteeing perfect satisfaction.

Maloney Bros. & Wells,
Box 75. Dansville, N. Y.

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil
climate and expert knowledge.

Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

H. M. Simpson & Sons,
Vincennes, Indiana

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
ata; Norway Maple; Silver Maple; Car. Poplars under
1 $\frac{1}{2}$ inch.

**A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS**

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.



This Big, Fine Stock of Cherry and Peach Will Make Your Trade Sit Up and Order NOW

The "Harrison Way" of growing fruit trees is the *safe* way; it assures satisfaction to your trade, and consequently more orders for you. It means planting orchards of our own with the varieties of fruit we grow, testing them out, and offering for sale only those that prove worthy.

It is the only safe way we know of, and it saves our customers—and *yours*, if you supply them with Harrison-grown stock—much disappointment and loss of time.

The upper and lower pictures show parts of our test orchards of Peach and Cherry. We have 50,000 Cherry and 500,000 Peach, every variety reliable, trustworthy and carefully tried out.

The center picture shows a scene in a commercial orchard, now in profitable bearing, planted with our trees. Peaches are now ripe at the home orchards. Come to Berlin and help yourself—the Maryland State Horticultural Society holds its summer meeting at our orchards at Berlin, July 28th. Come then—free entertainment at Berlin—or you will be welcome at any time.

We have been growing Peach trees for more than 20 years and now have the finest block of Peach trees in America. Come, see and be convinced.

You should get prices NOW on our Cherry and Peach trees for the next season's business. Write us about it *at once*—but first glance over the following list, and ask for prices on the other stock you'll need. Everything listed there is of the same high grade as the fruit described above.

LIST FOR THE WHOLESALE TRADE

500,000 Peach one year from bud.
 500,000 Apple, 1-yr. bud, 5 to 6 ft.
 500,000 Apple, 1-yr. grafts, 3 to 5 ft.
 80,000 Apple, 2-yr. buds, $\frac{3}{4}$ to $\frac{3}{4}$, and $\frac{3}{4}$ and up.
 30,000 Kieffer Pear, 2-yr., 50,000 1-yr., 4 to 5 ft.
 10,000 Bartlett Pear, 2 yr., $\frac{3}{4}$ and up, 5,000 $\frac{3}{4}$ to $\frac{3}{4}$.
 30,000 Cherry, sweet and sour, leading varieties, $\frac{3}{4}$ to $\frac{3}{4}$, 2-yr.
 20,000 Cherry, sweet and sour, in 1-yr.
 10,000 Plum, 2-yr., $\frac{3}{4}$ to $\frac{3}{4}$, and $\frac{3}{4}$ and up.
 2,000 Quince.
 100,000 Asparagus, 2-yr., 200,000 1-yr.
 Norway Maple, 200 2 in., 2,000 1 $\frac{1}{2}$ in., 3,000 1 $\frac{1}{4}$ in., 5,000 1 in., 10,000 $\frac{3}{4}$ in.
 Koster's Blue Spruce, 1,000 12 to 15 in., 1,000 18 to 24 in.
 Colorado Blue Spruce, 1,000 12 to 15 in., 100 2 ft., 50 3 ft.
 American Arbor Vitae, 1,000 2 ft., 300 3 ft., 300 4 ft., 300 5 ft.
 Norway Spruce, 1,000 6 ft., 2,000 5 ft., 3,000 4 ft., 4,000 3 ft., 5,000 2 ft.
 Silver Maple, 500 2 in., 5,000 1 $\frac{1}{2}$ in., 3,000 1 $\frac{1}{4}$ in., 5,000 1 in., 10,000 $\frac{3}{4}$ in.
 Box Elder, 1,000 2 in.
 American Black Ash, 1,000 1 $\frac{1}{2}$ in.
 Carolina Poplar, 1,000 1 $\frac{1}{4}$ in., 1,000 1 in., 1,000 $\frac{3}{4}$ in.
 American Linden, 1,000 1 in.
 American Elm, 1,000 1 in.

CALIFORNIA PRIVET

50,000 1 to 2 ft., 1 yr., 50,000 3 to 4 ft., 3-yr., 5 branches up.
 50,000 18 to 24 in., 2-yr., 50,000 4 to 5 ft., 3-yr., 6 branches up.
 50,000 2 to 3 ft., 4 branches up; 10,000 5 to 6 ft., 3-yr., 7 branches up.
 Blue Cedar, 1,000 2 ft.
 Baby Rambler Rose, 5,000 3-yr.
 50,000 Berberry Thunbergii, 18 to 24 inches.
 Rhododendrons, 18 in. Azaleas, 1 ft. Bay Trees, 5 ft. Hemlock Spruce, 5 ft.

GRAPES

80,000 Concord, 2-yr., transplanted, well-rooted and good top.
 20,000 Moore's Early, 2-yr., transplanted, well-rooted and good top.
 80,000 1-yr. Concord.
 100 acres in Strawberry Plants.

BUDS READY JULY 1st.

We have over 500,000 peach in nursery to cut buds from and 10,000 bearing trees, over 50 varieties.
 We have 100,000 apple in nursery to cut buds from and thousands of fruiting trees, over 50 varieties.

PEARS

We have 40,000 Kieffers in nursery to cut buds from and 3,000 bearing Kieffers.
 We have 30,000 Bartletts to cut buds from.

PLUMS

We have 10,000 plums in nursery to cut buds from and bearing orchards: Abundance, Burbank, Wickson, Red June.
 We have 30,000 Cherries in nursery to cut buds from sweet and sour: Early Richmond, Montmorency, Black Tartarian and others.

Harrison's Nurseries
 J.G. HARRISON & SONS PROPRIETORS
 BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.

Part of Our Test Orchard--100 Varieties of Peach Planted Here.

We do not offer any new sort for sale until it has been thoroughly "tried out" in this orchard and its merit proved to our satisfaction.

Gathering Peaches in a Virginia Orchard Planted with Our Trees



This Orchard, though young, is already yielding Profitable Crops

Cherry Trees in one of our Western Maryland Orchards—We have 50,000 Cherry Trees in our Nurseries just as good, ready to ship out this Fall.





THE NATIONAL NURSERYMAN



AUGUST, 1910

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

OREGON GROWN

ROSES

OWN ROOTS

Baltimore Belle Crimson Rambler

Dorothy Perkins Seven Sisters

Queen of the Prairie

CUT-LEAF WEEPING BIRCH

Carload Rates Through to Chicago. Prices Right.

Oregon Nursery Co., ORENCO,
ORE.

JEWELL

MINNESOTA

GROWN

NURSERY STOCK

Complete assortment of Fruit and Ornamental stock in all
varieties suited to northern culture. A specialty of Hardy
Shade Trees, Windbreak Stock, Evergreens (Coniferous)
Deciduous Shrubs, Apples and Native Plums

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1600 Acres

Established 1868

DIRECT IMPORTATIONS

McHUTCHISON & COMPANY

We are offering for FALL and SPRING delivery
BOSKOOP (HOLLAND) NURSERY STOCK.

Rhododendrons, Hardy Azaleas, Pæonies, Roses, Boxwood, Koster Blue Spruce, Clematis, Hydrangea P. G., Magnolias, Evergreens, etc.

OUDENBOSCH (HOLLAND) STOCK.

Norway and Schwedler Maples, Chestnuts, Tiliac, Rivers Purple Beech, Planes, Thorns, Evergreens, etc.

FRENCH ORNAMENTALS.

Spireas, Weigelas Syringas, Maples, Birch, Deutzia, Viburnum, etc. Small stock suitable for lining out.

JAPANESE NURSERY STOCK.

Jap. Maples, Sciadopitys, Thuya Obtusa, Jap. Iris, Azaleas, Kudzu Vines, Jap Cherries, Tree Pæonies, etc.

FROM ENGLAND.

Rhododendrons, Gooseberries (Whinham Industry, etc.), Trained Fruit Trees, Manetti Stocks, etc.

HERBACEOUS PLANTS AND PERENNIALS.

Phlox Decussata, Japan and German Iris, Aquatics, etc. from Royal Tottenham Nurseries, Deedemsvaart, Holland.

BAY TREES. Pyramids and Standards.

RAFFIA. Red Star Brand and 3 other grades. Bale lots only. Samples sent free. Several hundred bales always on hand.

WRITE US for catalogues, special lists, etc., on any of the above stock.

SHIPPING. We have our own Custom House Department. Special facilities at Harvrie, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock.

McHUTCHISON & CO., 17 Murray Street, New York City

North Carolina Peach Pits

THE BEST KIND

We are situated in the best section of the country for buying the small, natural Peach Pits, and are in a position to offer them in car loads or less. We guarantee our stock to be as represented. Have a quantity of 1909 stock to offer. Write us for prices.

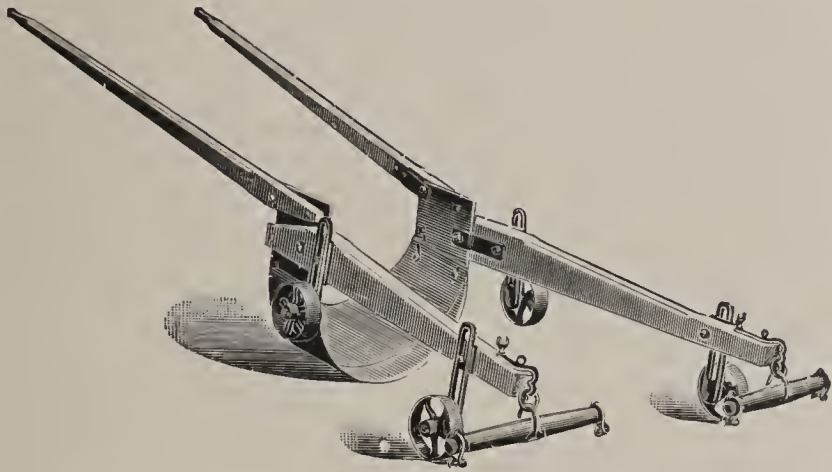
Morrison Produce and Provision Co.

STATESVILLE, N. C.

1857-1910

BRAGG'S COMMON SENSE TREE DIGGER

Repairs always on hand. Send for Catalogue



Digger gets all the roots at the rate of 20 to 40 thousand trees per day, and only needs same power as a plow.

L. G. BRAGG & CO.
KALAMAZOO, MICH.

Hardy Upland Grown Trees

CLIMATIC conditions and suitable soil enables us to produce exactly the quality trees required for building up a solid class of well satisfied patrons.



Having over Two Hundred acres of Nursery, we are prepared to offer a large assortment of the following strictly Two Year Stock, except as otherwise noted:

European and Japan Plums,
Sweet and Sour Cherry,
Standard and Dwarf Pears,
Standard Apple Grafts, 3 years old,
One Year Quince, and Japan Plums,
CHERRIES OUR SPECIALTY

Our root system is the finest in the United States. Patrons say our trees make business easy. Why not mail us your want list to be priced? Better still, come and see us, when we will gladly show you through our nurseries, and endeavor to name you attractive quotations.

Remember, no one sends out a better grade of trees than we. Each and every order entrusted with us, merits the personal attention of a member of our firm, thereby guaranteeing perfect satisfaction.

Maloney Bros. & Wells,
Box 75. Dansville, N. Y.

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil
climate and expert knowledge.

Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

H. M. Simpson & Sons,
Vincennes, Indiana

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
ata; Norway Maple; Silver Maple; Car. Poplars under
1 $\frac{1}{2}$ inch.

**A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS**

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

Harrison's Blue Spruce.

Grown Right; Will Please Your Trade and Make Money for You



You should not pass by the attractive opportunities that this season of the year offers, to build up a larger and more profitable evergreen business—particularly Koster's and Colorado Blue Spruce of the high quality that we are now offering. We grow these varieties with particular care, producing specimens of splendid development that you will be proud to sell—and that your trade will be mighty glad to have.

We have nearly 4,000 specimens of these two varieties in various sizes; we will be very glad to tell you about them, and to quote prices. The upper illustrations suggest a practical and beautiful way of planting them, and we'll gladly help you plan other effective arrangements.

The lower picture suggests another Harrison specialty—Norway Maples. We will have over 10,000 of these, in all sizes, ready to ship this winter.

You'll be sure to need some of these Trees and Plants, and all of the following are of the extra good quality that we put into everything we grow. For the fall trade we are offering a much more complete stock of Fruits and Ornamentals than this list shows. What-

ever you're "short" on, we can probably supply—and you can depend on its being *right*, too. Better drop a postal for the complete list NOW, before you forget it.

Surplus List for the Fall Trade

700,000 Peach, one year from bud.
 500,000 Apple, 1-year bud, 5 to 6 ft.
 500,000 Apple, 1-year grafts, 3 to 5 ft.
 100,000 Apple, 2-year buds, $\frac{5}{8}$ to $\frac{3}{4}$ in., and $\frac{3}{4}$ in. and up.
 50,000 Keiffer Pear, 2-yr.; 50,000 1-yr., 4 to 5 ft.
 10,000 Bartlett Pear, $\frac{5}{8}$ to $\frac{3}{4}$ in.; 10,000 $\frac{1}{2}$ to $\frac{5}{8}$ in.
 30,000 Cherry, sweet and sour, leading varieties, $\frac{5}{8}$ and $\frac{3}{4}$ in., 2-year, 20,000 1-year.
 10,000 Plum, 2-year, $\frac{5}{8}$ to $\frac{3}{4}$ in. and $\frac{3}{4}$ in. and up.
 2,000 Quince.
 100,000 Asparagus, 2-year; 200,000 1-year.
 Norway Maple, 200 2 in., 2,000 $1\frac{1}{2}$ in., 3,000 $1\frac{1}{4}$ in., 5,000 1 in., 10,000 $\frac{3}{4}$ in.
 Koster's Blue Spruce, 1,000 12 to 15 in., 1,000 18 to 24 in.
 Colorado Blue Spruce, 1,000 12 to 15 in., 100 2 ft., 50 3 ft., 25 4 ft.
 American Arborvitae, 1,000 2 ft., 300 3 ft., 300 4 ft., 300 5 ft.
 Norway Spruce, 100 6 ft., 200 5 ft., 3,000 4 ft., 4,000 3 ft., 5,000 2 ft.
 Silver Maple, 500 2 in., 5,000 $1\frac{1}{2}$ in., 3,000 $1\frac{1}{4}$ in., 5,000 1 in., 10,000 $\frac{3}{4}$ in.
 Box Elder, 1,000 2 in.
 American Black Ash, 1,000 $1\frac{1}{4}$ in.
 Carolina Poplar, 1,000 $1\frac{1}{4}$ in., 1,000 1 in., 1,000 $\frac{3}{4}$ in.
 American Linden, 1,000 1 in.
 American Elm, 1,000 1 in.

CALIFORNIA PRIVET

50,000..... 1 to 2 ft.	50,000..... 18 to 24 in.
50,000..... 2 to 3 ft.	50,000..... 3 to 4 ft.
20,000..... 4 to 5 ft.	10,000..... 5 to 6 ft.

Blue Cedar, 1,000, 2 ft. Baby Rambler Rose, 5,000, 3-year. 50,000 *Berberis Thunbergii*. Rhododendron, 18 in. Azaleas, 1 ft. Bay Trees, 5 ft. Hemlock Spruce, 5 ft.

GRAPES

80,000 Concord, 2-year, transplanted. 90,000 1-year Concord.
 20,000 Moore's Early, 2-year, transplanted.

100 Acres in Strawberry Plants.

Buds Ready July 1st. We have over 500,000 Peach in Nursery to cut buds from, and 10,000 bearing trees, over 50 varieties. **Apples.**—We have 100,000 Apple in Nursery to cut buds from and thousands of fruiting trees, over 50 varieties. **Pears.**—We have 40,000 Kieffers in Nursery to cut buds from and 3,000 bearing Kieffers. We have 30,000 Bartletts to cut buds from. **Plums.**—We have 10,000 Plums in Nursery to cut buds from and bearing orchards: Abundance, Burbank, Wickson, Red June. **Cherries.**—We have 30,000 Cherries in Nursery to cut buds from, sweet and sour: Early Richmond, Montmorency, Black Tartarian and others.

Harrison's Nurseries
 J.G. HARRISON & SONS PROPRIETORS
 BERLIN MARYLAND

You Are Invited to Visit Berlin This Summer

You've been planning a trip to Harrison's Nurseries for a long while—why not arrange that vacation trip so as to take it in *this* summer? We're easily reached from Baltimore and Philadelphia; only seven miles from Ocean City, Maryland's noted shore resort. Railroad service in four directions from Berlin every weekday.

Let us show you more than 2,000 acres of Nursery. We will meet you at the station and do everything possible to make your stay an entirely pleasant one.

Write, saying when we may expect you.





THE NATIONAL NURSERYMAN



SEPTEMBER, 1910

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

MOUNT ARBOR NURSERIES.....

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

WE ARE STRONG ON

CHERRY—sour varieties. APPLE—light grades.
CURRANTS—red varieties. CONCORD GRAPE

American ELM SEEDLINGS
HYBRID PERPETUAL ROSES

Ask for Fall Trade List now ready

EVERGREENS OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

JEWELL MINNESOTA GROWN NURSERY STOCK

Complete assortment of Fruit and Ornamental stock in all
varieties suited to northern culture. A specialty of Hardy
Shade Trees, Windbreak Stock, Evergreens (Coniferous)
Deciduous Shrubs, Apples and Native Plums

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1600 Acres

Established 1868

DIRECT IMPORTATIONS

McHUTCHISON & COMPANY

We are offering for FALL and SPRING delivery
BOSKOOP (HOLLAND) NURSERY STOCK.

Rhododendrons, Hardy Azaleas, Pæonies, Roses, Boxwood, Koster Blue Spruce, Clematis, Hydrangea P. G., Magnolias, Evergreens, etc.

OUDENBOSCH (HOLLAND) STOCK.

Norway and Schwedler Maples, Chestnuts, Tiliacs, Rivers Purple Beech, Planes, Thorns, Evergreens, etc.

FRENCH ORNAMENTALS.

Spireas, Weigelias Syringas, Maples, Birch, Deutzia, Viburnum, etc. Small stock suitable for lining out.

JAPANESE NURSERY STOCK.

Jap. Maples, Sciadopitys, Thuya Obtusa, Jap. Iris, Azaleas, Kudzu Vines, Jap Cherries, Tree Pæonies, etc.

FROM ENGLAND.

Rhododendrons, Gooseberries (Whinham Industry, etc.), Trained Fruit Trees, Manetti Stocks, etc.

HERBACEOUS PLANTS AND PERENNIALS.

Phlox Decussata, Japan and German Iris, Aquatics, etc. from Royal Tottenham Nurseries, Deedemsvaart, Holland.

BAY TREES. Pyramids and Standards.

RAFFIA. Red Star Brand and 3 other grades. Bale lots only. Samples sent free. Several hundred bales always on hand.

WRITE US for catalogues, special lists, etc., on any of the above stock.

SHIPPING. We have our own Custom House Department. Special facilities at Harvie, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock

McHUTCHISON & CO., 17 Murray Street, New York City

DREER'S PAEONIAS

We will dig our Paeonias in September and are booking orders for September and October delivery at special prices. The following varieties are offered in strong divisions of 3 to 5 eyes, all are of our own growing absolutely true to label.

VARIETIES OF PAEONIA CHINENSIS.

Agnes Mary Kelway. Rosy white guard petals, with deep creamy white center.

Achillea. Beautiful soft mauve, changing to rose-tinted white.

Andre Lauries. A fine tyrian rose; late

Baroness de Rothschild. Violet rose, with lighter shading.

Canary. Fine large early white, with creamy center.

Chrysanthemiflora Rosea. A fine large deep rose-pink, with paler shadings; early.

Charlemagne. Rose tinted white; flowers of very large size and good substance.

Candidissima. Sulphur yellow.

Couronne d'Or. Creamy white, yellow stamens.

Duc de Cazes. Guard petals tyrian rose, center soft rose-pink; a beautifully formed flower, useful for all purposes.

Duke of Wellington. One of the finest double white sorts; very free flowering.

Duchesse de Nemours. An extra fine large pure white.

Delachii. Amaranth red.

Edulis Superba. Soft mauve, with lighter shadings.

Prancois Ortegat. Brilliant crimson; full double flower.

Festiva Maxima. Pure white, center petals tipped red. This is the very large white variety, the most popular for cut flowers.

Grandiflora Rosea. Brilliant rosy carmine; large and double.

Grandiflora Carnea Plena. Flesh; sulphur center.

Humei. Rosey carmine; fine large flower; late.

Humei Rosea. Deep rose.

La Tulipe. Flesh pink, changing to white, with few crimson markings; large globular flower.

Lady Bramwell. A beautiful silvery rose, of large size and fine form.

Louis Van Houtte. Brilliant crimson maroon; good size and free flowering.

Mme. de Verneville. Broad sulphur-white guard petals, centre delicate rosy-white.

Mme. Forel. Bright deep pink, shading lighter towards the border.

Marie Lemoine (Lemoine's). Extra large, free-flowing, ivory-white.

Mme. Calot. White, tinted rose, changing to creamy white; fine.

Mme. Crousse. Cream guard, bluish-white center, tinted violet.

Paganini. Light solferino red, with lighter center.

Pomponia. Guard petals rosy mauve; primrose yellow center, changing to creamy white.

Queen Victoria. A good early white.

Reine des Fleurs. Rosy pink.

Reine des Roses. Pale rose lilac; center cream and pink.

Victoire Modeste. Blush rose and white.

Victoire Tricolor. Guard petals delicate lilac rose, center light salmon yellow.

Zoe Calot. White suffused with delicate rose.

PAEONIES, EARLY FLOWERING.

Officinalis (Mutabilis) Alba. Blush white.

Officinalis " Rosea. Soft bright pink.

Officinalis Rubra. Crimson.

Tenuifolia flore pleno. Crimson.

We take pride in maintaining our well-known reputation for liberal values. **WRITE FOR SPECIAL QUOTATIONS.**

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HENRY A. DREER, Inc., 714 CHESTNUT STREET PHILADELPHIA

Apple Seedlings

By constant spraying and thorough cultivating we have kept the foliage perfect on our Apple Seedling blocks. As we plant on new land the stocks are not effected with leaf spot—but are strong and vigorous.

Our grades will not be pinched, but will be liberal. We have no cheap grown contract seedlings. Our seedlings are all grown just the very best that—good land—long experience—and liberal use of money can make.

Let us furnish you the sort of stocks that will make a good stand of grafts or buds. The better the seedling—the better the graft. We are booking orders now for Fall and Winter delivery.

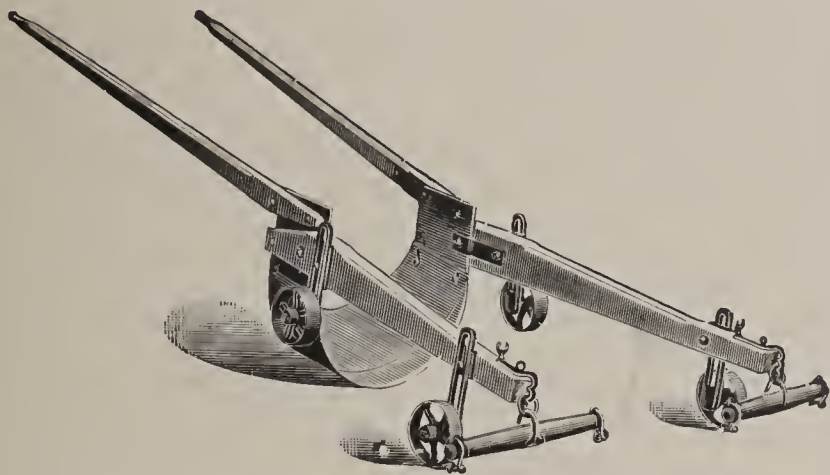
F. W. Watson & Co.

TOPEKA, KANSAS

1857-1910

BRAGG'S COMMON SENSE TREE DIGGER

Repairs always on hand. Send for Catalogue



Digger gets all the roots at the rate of 20 to 40 thousand trees per day, and only needs same power as a plow.

L. G. BRAGG & CO.
KALAMAZOO, MICH.

Seedling and Transplanted Evergreens by the million

Arbor Vitae	Jack Pine
Austrian Pine	Norway Spruce
Black Hill Spruce	Pinus Ponderosa
Colo. Blue Spruce	Scotch Pine
Concolor	White Pine
Engelmanii Spruce	White Spruce

We have these in all sizes and ages. Also a general line of nursery stock.

Evergreen price list now ready.

SHERMAN NURSERY COMPANY

CHARLES CITY, IOWA

SIMPSON

is the name of the men who
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CHERRY

that can be produced by suitable soil
climate and expert knowledge.

Take a look at the stock or ask for a
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quality of their

TREES

H. M. Simpson & Sons,
Vincennes, Indiana

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
ata; Norway Maple; Silver Maple; Car. Poplars under
1 $\frac{1}{2}$ inch.

**A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS**

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

Some of Your Customers Are Going to Start Profitable Peach Orchards With the Trees Offered in This Month's List

WE offer in this month's Surplus List one of the most attractive collections of peach trees that could be desired—one, we feel very sure, that will be taken up without much delay.

The "Harrison way" of growing peach trees has the approval of successful growers, and thousands of our customers testify that our trees are the best and most reliable that they can obtain anywhere.

YOUR customers will say that, too, for the same reason. Our care in growing Peach Trees, as well as our other fruits, spares the planter costly mistakes and disappointments of all descriptions, when the trees begin bearing.

Examples of this care are our trial orchards, where we rigidly test new varieties to determine whether they are valuable; our great commercial orchards, where we grow peaches for market, and give the varieties further careful



watching; and, last and always, the constant pains that we take in growing the young trees, to keep them clean and healthy, true to name, and reliable in every way.

YOU can profit by these methods which we employ to make our trees worthy our reputation; such stock as this will please your customers and bring you more business.

These are exactly the same kind of trees that we have planted in our own commercial orchards, now in successful bearing. Those trees are making money for us, and the ones in the following list will likewise prove profitable for your trade.

Read carefully the following list; then write us for full particulars and prices on whatever you will need this fall. We'll be glad to tell you about our stock, and you'll find it time well spent to write us NOW, while it's in your mind to do so.

SURPLUS LIST

	7 to 8 ft. 1-in.	6 to 8 ft. ¾ to 1-in.	5 to 6 ft. 9-16 to ¾	4 to 5 ft. ½ to 9-16	3-4 ft. ¾ to ½	2 to 3 ft.		7 to 8 ft. 1-in.	6 to 8 ft. ¾ to 1-in.	5 to 6 ft. 9-16 to ¾	4 to 5 ft. ½ to 9-16	3-4 ft. ¾ to ½	2 to 3 ft.
Elberta	5,000	10,000	30,000	10,000	5,000	5,000	Salway	1,000	2,000	3,000	3,000	2,000	1,000
Carman	1,000	2,000	5,000	2,000	1,000	500	Stump	1,000	2,000	3,000	3,000	2,000	1,000
Belle of Georgia.....	2,000	10,000	8,000	5,000	2,000	1,000	Slaphey			2,000	3,000	3,000	2,000
Ray	1,000	2,000	2,000	2,000	1,000	1,000	Bilyeu			1,000	5,000	3,000	2,000
Chair's Choice	1,000	2,000	1,000	1,000	1,000	500	Connett's			1,000	1,000	1,000	500
Crawford Lt.	2,000	1,000	2,000	5,000	3,000	2,000	Crosby			1,000	1,000	1,000	1,000
Champion	1,000	2,000	3,000	2,000	1,000	500	Ford's Lt. White			1,000	1,000	1,000	500
Crawford Ey.	500	1,000	2,000	2,000	500	500	Fitzgerald.....			1,000	1,000	1,000	500
Fox Seedling.....	500	1,000	2,000	2,000	1,000	500	Francis			1,000	1,000	1,000	500
Beer Smock.....		1,000	2,000	3,000	2,000	1,000	Foster			1,000	1,000	1,000	500
Greensboro	500	2,000	2,000	2,000	1,000	500	Kalamazoo			1,000	1,000	1,000	500
Geary		1,000	2,000	2,000	1,000	1,000	Heiley			1,000	1,000	1,000	500
Mt. Rose	500	2,000	2,000	2,000	1,000	500	New Prolific			1,000	1,000	1,000	500
Moore's Favorite	500	1,000	2,000	1,000	500	500	Niagara			1,000	1,000	1,000	500
Old Mixon F.....	500	1,000	2,000	1,000	500	500	Wonderful		1,000	3,000	3,000	1,000	1,000
Reeves' Favorite	500	1,000	2,000	1,000	500	500	Waddell		1,000	3,000	3,000	1,000	1,000
Stephens R. R.	100	1,000	1,000	1,000	1,000	500	White Heath Clg.	500	1,000	1,000	1,000	500	500

We have 45 other standard varieties ranging from 300 to 4,000 each

2,000 Quince—1-year and 2-year.
Norway Maple—200 2-in., 2,000 1½-in., 3,000 1¼ in., 5,000 1-in., 10,000 ¾-in.
Koster's Blue Spruce—15,000 12 to 15-in., 1,000 18 to 24-in.,
Col. Blue Spruce—1,000 12 to 15-in., 100 2-ft., 50 4-ft.
Norway Spruce—1,000 6-ft., 2,000 5-ft., 3,000 4-ft., 4,000 3-ft., 5,000 2-ft.
Silver Maple—500 2-in., 5,000 1½-in., 3,000 1-in., 10,000 ¾-in.
Box Elder—1,000 2-in., 500 1½-in., 500 1-in.
American Black Ash—1,000 1¼-in., 500 1-in.
Carolina Poplars—1,000 1¼-in., 1,000 1-in., 1,000 ¾-in.
American Linden—1,000 1-in. American Elm—1,000 1-in.

California Privet—50,000 1 to 2-ft., 50,000 18 to 24-in., 2-year; 50,000 2 to 3-ft., four branches, 50,000 3 to 4-ft., 3-year, five branches; 50,000 4 to 5-ft., 3-year, six branches; 10,000 5 to 6-ft., 3-year, seven branches and up.
Blue Cedar—1,000 2-ft.
5,000 Baby Ramblers—3-year.
50,000 Barberry Thunbergii—18 to 24-in.
1,000 Azalias 1-ft. and up.
1,000 Rhododendrons—18-in. and up.
Bay Trees—5 ft. and up. Hemlock Spruce—5 ft. and up.
70,000 Concord grapes, 2-year transplanted; 15,000 Moore's Early, transplanted, well-rooted and good crop; 70,000 Concord, 1-year.

Harrison's Nurseries
J.G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND



THE NATIONAL NURSERYMAN



OCTOBER, 1910

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MONROE, MICH.

MOUNT ARBOR NURSERIES.....

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

WE ARE STRONG ON
CHERRY—sour varieties. EUROPEAN PLUM
CURRANTS—red varieties. CONCORD GRAPE
American ELM SEEDLINGS
HYBRID PERPETUAL ROSES
CALIFORNIA PRIVET

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RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

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PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

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JEWELL MINNESOTA GROWN

NURSERY STOCK

Complete assortment of Fruit and Ornamental stock in all
varieties suited to northern culture. A specialty of Hardy
Shade Trees, Windbreak Stock, Evergreens (Coniferous)
Deciduous Shrubs, Apples and Native Plums

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1600 Acres

Established 1868

?

Have you received wholesale catalog of Vincent Lebreton's Nurseries

?

ANGERS, FRANCE

It is ready for distribution and contains current prices upon a full line of.

FRENCH ORNAMENTALS

Suitable for lining out. It quotes FRUIT STOCKS, ORNAMENTALS (1000 varieties); Evergreens, (200 varieties), Rose Stocks, etc. If you have not received it write us. We will gladly send it.

Fall and Spring Shipment

BOSKOOP NURSERY STOCK. Clematis, Dwarf Tree Roses, Boxwood, Rhododendrons, etc.

OUDEBOSCH NURSERY STOCK. Norway and Schwedler Maples, Tilias, Chestnuts, etc.

JAPANESE NURSERY STOCK. Sciadopitys, Jap. Maples, Iris, Thuya, etc.

BAY TREES. Pyramids, Standards and all other shapes from Belgium. Herbaceous and Perennial stock from Royal Tottenham Nurseries, Deedensvoort, Holl.

RAFFIA. Red Star Brand and three other grades from stock at New York.

Whinham Industry Gooseberries, Manetti, Trained Fruit Trees, etc. from England.

SHIPPING. We have our own Custom House Dep't. Special facilities at Havre, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable routine of stock.

McHUTCHISON & CO., 17 Murray St., New York City

DREER'S PAEONIAS

We will dig our Paeonias in September and are booking orders for September and October delivery at special prices. The following varieties are offered in strong divisions of 3 to 5 eyes, all are of our own growing absolutely true to label.

VARIETIES OF PAEONIA CHINENSIS.

Agnes Mary Kelway. Rosy white guard petals, with deep creamy white center.

Achillea. Beautiful soft mauve, changing to rose-tinted white.

Andre Lauries. A fine tyrian rose; late

Baroness de Rothschild. Violet rose, with lighter shading.

Canary. Fine large early white, with creamy center.

Chrysanthemiflora Rosea. A fine large deep rose-pink, with paler shadings; early.

Charlemagne. Rose tinted white; flowers of very large size and good substance.

Candidissima. Sulphur yellow.

Couronne d'Or. Creamy white, yellow stamens.

Duc de Cazes. Guard petals tyrian rose, center soft rose-pink; a beautifully formed flower, useful for all purposes.

Duke of Wellington. One of the finest double white sorts; very free flowering.

Duchesse de Nemours. An extra fine large pure white.

Delachii. Amaranth red.

Edulis Superba. Soft mauve, with lighter shadings.

Francois Ortegal. Brilliant crimson; full double flower.

Festiva Maxima. Pure white, center petals tipped red. This is the very large white variety, the most popular for cut flowers.

Grandiflora Rosea. Brilliant rosy carmine; large and double.

Grandiflora Carne Plena. Flesh; sulphur center.

Humei. Rosey carmine; fine large flower; late.

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HENRY A. DREER, Inc., 714 CHESTNUT STREET PHILADELPHIA

Humei Rosea. Deep rose.

La Tulipe. Flesh pink, changing to white, with few crimson markings; large globular flower.

Lady Bramwell. A beautiful silvery rose, of large size and fine form.

Louis Van Houtte. Brilliant crimson maroon; good size and free flowering.

Mme. de Verneville. Broad sulphur-white guard petals, centre delicate rosy-white.

Mme. Forel. Bright deep pink, shading lighter towards the border.

Marie Lemoine (Lemoine's). Extra large, free-flowing, ivory-white.

Mme. Calot. White, tinted rose, changing to creamy white; fine.

Mme. Crousse. Cream guard, bluish-white center, tinted violet.

Paganini. Light solferino red, with lighter center.

Pomponia. Guard petals rosy mauve; primrose yellow center, changing to creamy white.

Queen Victoria. A good early white.

Reine des Fleurs. Rosy pink.

Reine des Roses. Pale rose lilac; center cream and pink.

Victoire Modeste. Blush rose and white.

Victoire Tricolor. Guard petals delicate lilac rose, center light salmon yellow.

Zoe Calot. White suffused with delicate rose.

PAEONIES, EARLY FLOWERING.

Officinalis (Mutabilis) Alba. Blush white.

Officinalis " Rosea. Soft bright pink.

Officinalis Rubra. Crimson.

Tenuifolia flore pleno. Crimson.

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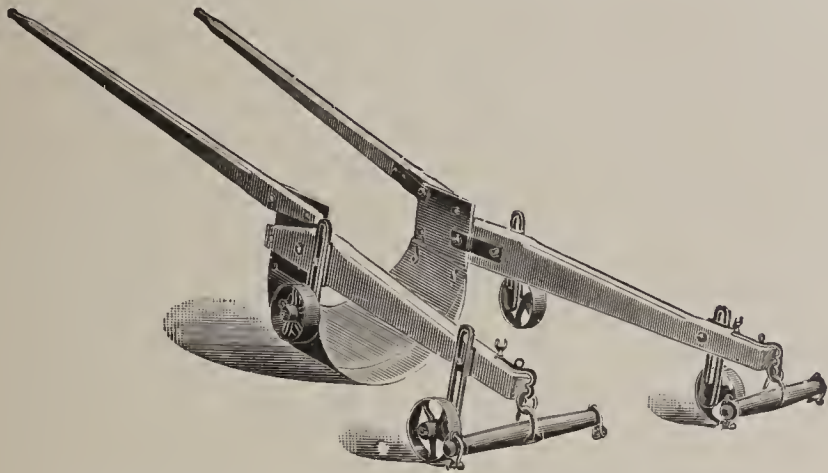
F. W. Watson & Co.

TOPEKA, KANSAS

1857-1910

BRAGG'S COMMON SENSE TREE DIGGER

Repairs always on hand. Send for Catalogue



Digger gets all the roots at the rate of 20 to 40 thousand trees per day, and only needs same power as a plow.

L. G. BRAGG & CO.
KALAMAZOO, MICH.

Seedling and Transplanted Evergreens by the million

Arbor Vitae	Jack Pine
Austrian Pine	Norway Spruce
Black Hill Spruce	Pinus Ponderosa
Colo. Blue Spruce	Scotch Pine
Concolor	White Pine
Engelmanii Spruce	White Spruce

We have these in all sizes and ages. Also a general line of nursery stock.

Evergreen price list now ready.

SHERMAN NURSERY COMPANY

CHARLES CITY, IOWA

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is the name of the men who
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TREES

H. M. Simpson & Sons,
Vincennes, Indiana

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
ata; Norway Maple; Silver Maple; Car. Poplars under
1 $\frac{1}{2}$ inch.

**A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS**

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

TO THE WHOLESALE TRADE

Following is a list of Fruit and Ornamental Stock offered by us for the fall and winter season, 1910-11. This is some of the finest we have ever grown, and is sure to please you and your trade. In common with all Harrison stock, these trees and plants are grown with great care, and have developed a good growth, with excellent roots.

The stock offered in this list is strictly true to name and variety.

APPLE—two-year

	6-7 ft. 1 in.	5-6 ft. 1 1/8 in.	4-5 ft. 1 1/4 in.	3-4 ft. 1 1/2 in.
Baldwin	200	1000	1000	1000
Ben Davis	1000	1000	1000	1000
Dominie	50	100	200	100
Duchess		500	500	200
Early Harvest		2000	1000	1000
Early Strawberry		100	100	100
Flora Belle	50	300	300	300
Gano	100	500	500	500
Grimes Golden	500	1000	1000	1000
Gravenstein	100	800	1000	800
Kinnards		100	100	100
King	50	100	100	100
Lankford	50	200	200	200
Longfield	50	100	100	100
Missouri Pippin	50	200	200	200
M. B. Twig	500	100	100	100
McIntosh Red	200	500	500	500
Myrick	100	100	100	50
Nero		100	100	100
N. W. Greening	50	50	50	50
Opalescent	50	200	200	200
R. I. Greening		500	500	500
Roman Stem		200	200	200
Rolfe	50	200	200	100
Red Astrachan	100	1000	1000	1000
Salome	50	100	100	50
Scott's Winter		100	100	55
Stark	200	400	300	200
Sweet Bough	50	50	50	50
Virginia Beauty		25	25	25
Walbridge	50	50	50	25
Wealthy		500	500	500
Winesap	800	500	500	300
Wolf River	50	200	200	200
Yellow Belle	50	100	100	100
Williams Early Red	50	1000	1000	1000
Yel. Transparent	500	5000	3000	2000
Transcendent	500	500	500	500
Golden Beauty	500	500	500	500
Hyslop	500	500	500	500

APPLE—one-year, budded on whole root

	5-6 ft.	4-5 ft.	3-4 ft.	2-3 ft.
A. G. Russett	200	200	200	200
Alexander	200	200	200	200
Arkansas Black	100	100	100	100
Baldwin	3000	3000	3000	3000
Ben Davis	3000	3000	3000	3000
Bismarck	100	100	100	100
C. R. June	200	200	200	200
Carthouse	100	100	100	100
Cooper's Market	100	100	100	100
Dominie	100	100	100	100
Dutchess	1000	2000	2000	2000
Early Harvest	200	200	200	200
Early Ripe	50	50	50	50
Early Colton	50	50	50	50
Early Strawberry	150	150	150	150
Fall Pippin	150	150	150	150
Gano	500	1000	1000	1000
Grimes Golden	1000	5000	3000	1000
Jonathan	500	5000	3000	1000
Fallowater	150	150	150	150
Fourth of July	200	200	200	200
Kinnard	100	100	100	100
King	200	200	200	200
Lankford	100	100	100	100
Longfield	100	100	100	100
Missouri Pippin	100	100	100	100
M. B. Twig	500	500	300	300
Mann	50	50	50	50
McIntosh	300	300	300	300
Northern Spy	50	2000	200	200
Maiden's Blush	100	500	50	50
Myrick	100	100	50	50
Nero	50	100	100	100
N. W. Greening	200	300	300	300
Pewaukee	50	100	100	100
Rawle's Janet	50	100	100	100
R. I. Greening	200	300	300	300
Rolfe	50	100	100	100
Red Astrachan	200	500	500	500
Rambo	50	100	100	100
Salome	50	100	100	100
Stark	500	1000	500	500
Scott's Winter	50	50	50	50
Smokehouse	50	50	50	50
Sweet Bough	50	100	100	100
Tallman's Sweet	50	100	100	100
Walbridge	500	100	50	50
Wealthy	200	500	500	500
Wagner	50	100	100	100
Winter Banana	100	200	200	100
W. S. Paradise	100	200	200	100
Winesap	500	1000	1000	500
Wolf River	200	500	500	200
William's Early Red	100	500	500	500
Yellow Belle	100	200	200	200
Yellow Transparent	500	2000	2000	2000
Transcendent	100	100	100	100
Hyslop	100	100	100	100
Golden Beauty	50	50	50	50
Martha	50	50	50	50

PEACH

	6-7 ft. 1 in.	5-6 ft. 1 1/8 in.	4-5 ft. 1 1/4 in.	3-4 ft. 1 1/2 in.	2-3 ft.
Admiral Dewey	300	300	200	200	200
Atlanta	100	100	100	100	100
Amsden June	100	200	200	200	100
Alexander	100	300	300	300	100
Belle of Georgia	3000	5000	5000	5000	2000
Bray's Rare Ripe	500	1000	1000	1000	500
Beer Smock	2000	4000	4000	3000	1000
Bokara	100	100	200	100	100
Brandywine	100	100	100	100	100
Bilyeu		2000	5000	4000	2000
Chair's Choice	2000	2000	2000	2000	2000
Crawford Late	5000	5000	5000	5000	2000
Carman	2000	2000	2000	2000	1000
Connetts Sou. Ear.	1000	1000	1000	1000	1000
Christiana	200	200	100	100	100
Chinese Cling	200	200	200	200	200
Cobler	200	200	200	200	200
Champion	3000	3000	3000	3000	1000
Capt. Ede	400	400	400	400	400
Crawford Early	2000	2000	2000	2000	1000
Crosby	1000	3000	3000	3000	2000
Denton	500	500	500	500	500
Engle's Mammoth	1000	2000	2000	2000	1000
Early Michigan	100	100	100	100	100
Eureka	200	200	200	100	100
Early Rivers	200	200	200	100	100
Edgemont Beauty	300	500	500	500	200
Elberta	10000	25000	25000	25000	20000
Ford's Late	1000	1000	1000	1000	500
Fitzgerald	1000	1500	1000	1000	500
Frances	500	1500	1500	1500	500
Fox Seedling	1000	2000	1000	1000	500
Foster	1000	1500	1500	1000	500
Globe	200	500	500	300	200
Gold Drop	100	200	200	200	100
Gold Mine	50	50	100	50	50
Greensboro	3000	4000	3000	2000	500
Geary's Hold-On					
Hill's Chili	300	300	300	300	300
Heiley's		1000	1000	1000	1000
Holland Cling	200	200	200	200	200
Harrison Cling	800	800	800	800	800
Krunnel's	500	500	500	500	500
Klondike		50	50	50	50
Kalamazoo	600	600	600	600	600
Levy's Late	600	600	600	600	600
Lorentz	200	200	200	200	200
Lodge	300	300	200	200	100
Lemon Free	500	500	500	500	500
McCallister	600	600	500	500	500
Marshall	50	100	100	50	50
Mt. Rose	1000	3000	3000	3000	3000
Moore's Favorite	1000	3000	3000	3000	1000
Mamie Ross	500	600	400	300	200
Matthew's Beauty	400	500	500	500	200
Mayflower	500	500	500	500	200
New Prolific	500	500	500	500	300
Niagara	600	700	400	300	200
Newington Cling	200	200	200	200	200
O. M. Free	1000	3000	3000	3000	2000
Prize	500	300	300	300	300
Picquet's Late	400	400	400	400	400
Reeve's Favorite	2000	4000	4000	3000	2000
Stephen's Rareripe	1000	2000	2000	2000	2000
Salway	5000	6000	6000	4000	3000
Slappey	1000	2000	3000	2000	1000
Sunrise Cling	100	200	100	100	100
Triumph	400	400	400	400	400
Sneed	300	300	300	300	300
Stump	1000	3000	3000	3000	2000
Wonderful	2000	3000	2000	2000	1000
Waddell	1000	1000	1000	1000	1000
Willett	500	500	500	500	500
Wilkin's Cling	300	300	300	300	300
Wheatland	50	50	50	50	20
White Heath Cling	1000	1000	1000	1000	1000
Yellow St. John	500	500	400	400	400

STANDARD PEAR—two-year

	6-7 ft. 1 in.	5-6 ft. 1 1/8 in.	4-5 ft. 1 1/4 in.	3-4 ft. 1 1/2 in.
Bartlett	200	5000	10000	5000
Flemish Beauty	100	500	500	500
Garber	50	500	500	500
Le Conte	50	200	200	200
Kieffer	1000	5000	5000	5000
Seckel		500	500	200

DWARF PEAR

	5-6 ft.	4-5 ft.	3-4 ft.
Dwarf Bartlett	1000	1000	500

CHERRY—two-year

	1 in.	3/4 in.	5/8 in.	1/2 in.	3/8 in.
Black Tartarian	100	500	500	500	200
Baldwin	50	200	200	200	200
Early Richmond	200	5000	10000	5000	2000
Montmorency	100	3000	3000	2000	2000
English Morello		100	100	100	100
Gov. Wood	100	300	300	300	300
May Duke		100	100	50	50
Napoleon	100	300	300	300	300
Olivet		150	100	100	100
Wragg	50	150	150	100	100
Windsor	50	150	150	100	100
Yellow Spanish	100	500	400	300	200

PLUM—two-year

	6-7 ft. 1 in.	5-6 ft. 1 1/8 in.	4-5 ft. 1 1/4 in.	3-4 ft. 1 1/2 in.
Abundance	100	500	500	300
Burbank	200	500	500	300
Red June	200	600	600	500
Wickson	1000	1500	1500	500

GRAPE—two-year transplanted

Concord	90000
Moore's Early	30000

CALIFORNIA PRIVET

1000, 7 to 8 ft.	50000, 3 to 4 ft.
2000, 6 to 7 ft.	50000, 2 to 3 ft.
10000, 5 to 6 ft.	50000, 18 to 24 in.
20000, 4 to 5 ft.	50000, 12 to 18 in.

BARBERRY THUNBERGII—

2000, 18 to 24 in.
5000, 12 to 18 in.

BABY RAMBLER ROSE—

3-year

NORWAY MAPLE—

200, 12 ft. high, 2 in. diameter
2000, 10 ft. high, 1 1/2 in. diameter
3000, 8 to 10 ft. high, 1 1/4 in. diameter
5000, 6 to 7 ft. high, 1 in. diameter

SILVER MAPLE—

500, 12 ft. high, 2 in. diameter
5000, 10 ft. high, 1 1/2 in. diameter
3000, 8 to 10 ft. high, 1 1/4 in. diameter
5000, 6 to 7 ft. high, 1 in. diameter

BOX ELDER—

1700, 8 to 10 ft. high, 1 1/4 in. diameter
1000, 6 to 7 ft. high, 1 in. diameter

AMERICAN ELM—

50, 8 to 10 ft. high, 1 1/4 in. diameter
1000, 6 to 7 ft. high, 1 in. diameter

AMERICAN LINDEN—

50, 8 to 10 ft. high, 1 1/4 in. diameter
50, 6 to 7 ft. high, 1 in. diameter



THE NATIONAL NURSEYMAN



NOVEMBER, 1910

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

MOUNT ARBOR NURSERIES.....

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

WE ARE STRONG ON
CHERRY—sour varieties. EUROPEAN PLUM
CURRANTS—red varieties. CONCORD GRAPE
American ELM SEEDLINGS
HYBRID PERPETUAL ROSES
CALIFORNIA PRIVET

Ask for Fall Trade List now ready

JEWELL MINNESOTA GROWN

NURSERY STOCK

Complete assortment of Fruit and Ornamental stock in all
varieties suited to northern culture. A specialty of Hardy
Shade Trees, Windbreak Stock, Evergreens (Coniferous)
Deciduous Shrubs, Apples and Native Plums

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

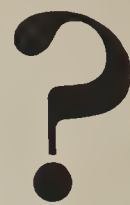
1600 Acres

Established 1868



Have you received Special Price-list of

UNION NURSERIES



OUDENBOSCH, HOLLAND

quoting on full line of upright growing trees such as

NORWAY & SCHWEDLER MAPLES, Tillas, Chestnuts, Thorns, Elms, Beech, Birch, Planes, Ash, Evergreens, (balled and burlapped), etc.

Union Nurseries are headquarters in Holland for Norway Maples, from whips to large trees—priced according to selection. Write for catalog, special offers, etc.

FALL AND SPRING SHIPMENT

BOSKOOP NURSERY STOCK. Clematis, Dwarf and Tree Roses, Boxwood, Rhododendrons, Paeonies, etc.

FRENCH ORNAMENTALS. (1000 varieties). Evergreens, (200 varieties) all suitable for lining out.

JAPANESE NURSERY STOCK. Sciadopitys, Jap. Maples, Tree Paeonies, Iris, Thuya, Hardy Lilies, etc.

BAY TREES. Pyramids, Columns, Standards, high and short stems and all other shapes from Belgium.

HERBACEOUS AND PERENNIAL STOCK. From Royal Tottenham Nurseries, Deedemsvaart, Holland.

RAFFIA. RED STAR BRAND and three other grades from stock at New York. (Bale lots only).

ENGLISH Gooseberries, Whinham Industry, Whitesmith, etc. Trained Fruit Trees, etc.

SHIPPING. We have our own Custom House Department. Shipping connections at Havre, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock.

McHUTCHISON & CO., 17 Murray St., New York City

NORTH CAROLINA
PEACH SEED....

THE BEST EVER

TRUE TO NAME

ALL 1910 CROP---Seed Rather Small

WRITE FOR SPECIAL PRICE TO

Morrison Produce

and Provision Co.

STATESVILLE,
N. C.

FOREST TREES FRUIT STOCKS

and BRIARS. Millions in Stock

Seedlings and transplanted. All healthy, stout and well rooted stuff, very cheap. . .

Best shipping facilities via Hamburg at special freight rates.

Catalogues and Forest Planter's Guide free on application.

J. HEINS' SONS

By special appointment to the Court

Imperial and Royal

Largest Nursery in the World

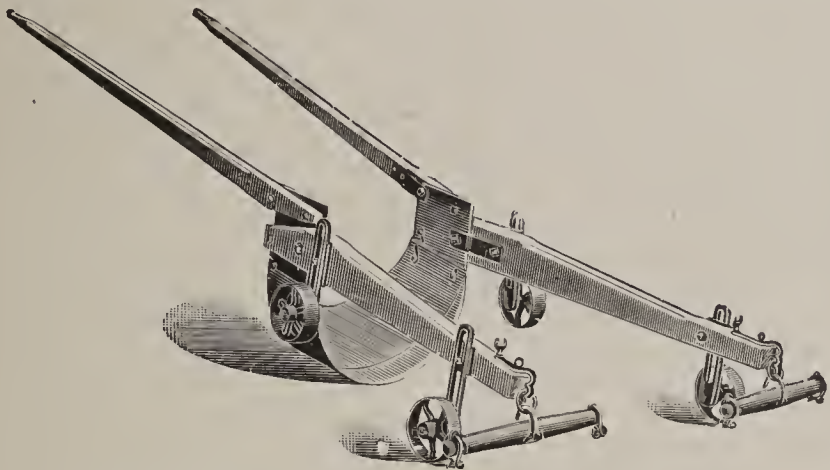
Shipments of over 160 millions of
Plants annually

HALSTENBEK, No. 152,
Near Hamburg, Germany

1857-1910

BRAGG'S COMMON SENSE TREE DIGGER

Repairs always on hand. Send for Catalogue



Digger gets all the roots at the rate of 20 to 40 thousand trees per day, and only needs same power as a plow.

L. G. BRAGG & CO.
KALAMAZOO, MICH

Seedling and Transplanted Evergreens by the million

Arbor Vitae

Austrian Pine

Black Hill Spruce

Colo. Blue Spruce

Concolor

Engelmanii Spruce

Jack Pine

Norway Spruce

Pinus Ponderosa

Scotch Pine

White Pine

White Spruce

We have these in all sizes and ages. Also a general line of nursery stock.

Evergreen price list now ready.

SHERMAN NURSERY COMPANY

CHARLES CITY, IOWA

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil
climate and expert knowledge.

Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

H. M. Simpson & Sons,
Vincennes, Indiana

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
ata; Norway Maple; Silver Maple; Car. Poplars under
1 $\frac{1}{2}$ inch.

**A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS**

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

Harrison's One Million Peach Trees

Will Help You Make a New Peach

Record in Your 1911 Sales : : :

A lot of people are feeling mighty good over the returns from their 1910 peach crops—they, and their friends are planning to set out bigger orchards next year. A great many of these are *your* customers, or would be, if offered the proper inducements in the form of first-class stock and the right kind of prices.

Your chance to turn a lot of that business your way is in Harrison's peach trees—we have one million high-grade trees this year, all of good varieties that we have tested out in our trial orchards, and KNOW.

This is all clean, vigorous stock, grown from good seed, budded from trees known to be true to name and



Mr. Orlando Harrison and a Typical Harrison Peach Tree

type and free from yellows, and carefully propagated to produce the most vigorous growth possible. It's good, A1 stock—you will like it, so will your trade.

There's money for you in handling Harrison's stock—get our prices now, if you haven't them already, and learn the advantages of buying from a house that knows the best methods of producing good stock and putting it up in shape for the best growth after transplanting.

We'd like to number *you* among our customers—write us NOW, get our prices, and let us and our splendid stock help you to *more* and *better* business in 1911!

LIST OF SURPLUS STOCK

APPLE—two-year

1-in. 6-7 ft. 5-6 ft. 4-5 ft. 3-4 ft.

	1-in.	6-7 ft.	5-6 ft.	4-5 ft.	3-4 ft.
Baldwin	200	1000	1000	1000	1000
Ben Davis	1000	1000	1000	1000	1000
Dominie	50	100	200	100	100
Duchess		500	500	500	200
Early Harvest		2000	1000	1000	1000
Ea. Strawberry		100	100	100	100
Flora Belle	50	300	300	300	300
Gano	100	500	500	500	500
Grimes Golden	500	1000	1000	100	1000
Gravenstein	100	800	1000	800	800
Kinnards		100	100	100	100
King	50	100	100	100	100
Lankford	50	200	200	200	200
Longfield	50	100	100	100	100
Missouri Pippin	50	200	200	200	200
M. B. Twig	500	100	100	100	100
Myrick	100	100	100	50	50
Nero	500	500	500	500	100
N. W. Greening	50	50	50	50	50
Opalescent	50	200	200	200	200
R. I. Greening		500	500	500	500
Roman Stem		200	200	200	200
Rolfe	50	200	200	100	100
Red Astrachan	100	1000	1000	1000	1000
Salome	50	100	100	50	50
Scott's Winter		100	100	55	50
Stark	200	400	300	200	100
Sweet Bough	50	50	50	50	50
Virginia Beauty		25	25	25	25
Walbridge	50	50	50	25	25
Wealthy		500	500	500	500
Winesap	800	500	500	500	300
Wolf River	50	200	200	200	200
Yellow Belle	50	100	100	100	100
Williams Ea. Rd	50	1000	1000	1000	1000
Yel. Transparent	500	5000	3000	3000	2000
Transcendent	500	500	500	500	500
Golden Beauty	500	500	500	500	500
Hyslop	500	500	500	500	500

APPLE—one year, budded on whole root

5-6 ft. 4-5 ft. 3-4 ft. 2-3 ft.

	5-6 ft.	4-5 ft.	3-4 ft.	2-3 ft.
A. G. Russett	200	200	200	200
Alexander	200	200	200	200
Arkansas Black	100	100	100	100
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Early Colton	50	50	50	50
Early Strawberry	150	150	150	150
Fall Pippin	150	150	150	150
Gano	500	1000	1000	1000
Grimes Golden	1000	5000	3000	1000
Jonathan	500	5000	3000	1000
Fallowater	150	150	150	150
Fourth of July	200	200	200	200
Kinnard	100	100	100	100
King	200	200	200	200
Lankford	100	100	100	100
Longfield	100	100	100	100
Missouri Pippin	100	100	100	100
M. B. Twig	500	500	300	300
Mann	50	50	50	50
McIntosh	300	300	300	300
Northern Spy	50	2000	200	200
Maiden's Blush	100	500	50	50
Myrick	100	100	50	50
Nero	550	500	500	100
N. W. Greening	200	300	300	300
Pewaukee	50	100	100	100
Rawle's Janet	50	100	100	100
R. I. Greening	200	300	300	300
Rolfe	50	100	100	100

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Beer Smock	2000	4000	4000	3000	1000
Bokara	100	100	200	100	100
Brandywine	100	100	100	100	100
Bilyeu		2000	5000	4000	2000
Chair's Choice	2000	2000	2000	2000	2000
Crawford Late	5000	5000	5000	5000	2000
Carman	2000	2000	2000	2000	1000
Connetts Sou. Ea.	1000	1000	1000	1000	1000
Christiana	200	200	100	100	100
Chinese Cling	200	200	200	200	200
Cobler	200	200	200	200	200
Champion	3000	3000	3000	3000	1000
Capt. Ede	400	400	400	400	400
Crosby	1000	3000	3000	3000	2000
Denton	500	500	500	500	500
Engle's Mam'th	1000	2000	2000	2000	1000
Early Michigan	100	100	100	100	100
Eureka	200	200	200	100	100
Early Rivers	200	200	200	100	100
Edgemont Beauty	300	500	500	500	200
Elberta	10000	25000	25000	25000	20000
Ford's Late	1000	1000	1000	1000	500
Fitzgerald	1000	1500	1000	1000	500
Frances	500	1500	1500	1500	500
Fox Seedling	1000	2000	1000	1000	500
Foster	1000	1500	1500	1000	500
Globe	200	500	500	300	200
Gold Drop	100	200	200	200	100
Gold Mine	50	50	100	50	50
Greensboro	3000	4000	3000	2000	500
Geary's Hold-On					
Hill's Chili	300	300	300	300	300
Heiley's		1000	1000	1000	1000

Many other varieties not listed here for want of room. Write for particulars.

Here are some of the other good things we are offering just now: Apple, Pear, Cherry, Grape, Strawberry, Maple, Privet, and scores of other choice things growing in our 2000-odd acres of nursery.

Harrison's Nurseries
J. G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND

Designed and written by the McFarland Publicity Service, Harrison, Pa.



THE NATIONAL NURSERYMAN



DECEMBER, 1910

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E. S. WELCH, Proprietor

Shenandoah, Iowa

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Wholesale Trade

WE ARE STRONG ON
CHERRY—sour varieties. EUROPEAN PLUM
CURRANTS—red varieties. CONCORD GRAPE
American ELM SEEDLINGS
HYBRID PERPETUAL ROSES
CALIFORNIA PRIVET

Ask for Fall Trade List now ready

EVERGREENS OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

JEWELL MINNESOTA GROWN

NURSERY STOCK

Complete assortment of Fruit and Ornamental stock in all
varieties suited to northern culture. A specialty of Hardy
Shade Trees, Windbreak Stock, Evergreens (Coniferous)
Deciduous Shrubs, Apples and Native Plums

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1600 Acres

Established 1868

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UNION NURSERIES

OUDENBOSCH, HOLLAND

?

quoting on full line of upright growing trees such as

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Union Nurseries are headquarters in Holland for Norway Maples, from whips to large trees—priced according to selection. Write for catalog, special offers, etc.

FALL AND SPRING SHIPMENT

BOSKOOP NURSERY STOCK. Clematis, Dwarf and Tree Roses, Boxwood, Rhododendrons, Paeonies, etc.

FRENCH ORNAMENTALS. (1000 varieties). Evergreens, (200 varieties) all suitable for lining out.

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HERBACEOUS AND PERENNIAL STOCK. From Royal Tottenham Nurseries, Deedemsvaart, Holland.

RAFFIA. RED STAR BRAND and three other grades from stock at New York. (Bale lots only).

ENGLISH Gooseberries, Whinham Industry, Whitesmith, etc. Trained Fruit Trees, etc.

SHIPPING. We have our own Custom House Department. Shipping connections at Havre, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock.

McHUTCHISON & CO., 17 Murray St., New York City

North Carolina Peach Seed

Shipped in
2 1-2 bushel,
heavy bags



Unusually Nice
Stock
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Seed Smaller
than usual

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Morrison Produce
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STATESVILLE, N. C.

FOREST TREES FRUIT STOCKS and BRIARS. Millions in Stock

Seedlings and transplanted. All healthy, stout and well rooted stuff, very cheap. . .

Best shipping facilities via Hamburg at special freight rates.

Catalogues and Forest Planter's Guide free on application.

J. HEINS' SONS

By special appointment to the Court
Imperial and Royal
Largest Nursery in the World

Shipments of over 160 millions of
Plants annually

HALSTENBEK, No. 152,
Near Hamburg, Germany

Fifty to Sixty Thousand Elberta for the Trade

GRADES

$\frac{3}{4}$ to 1 inch—5 to 6 feet
 $\frac{5}{8}$ to $\frac{3}{4}$ " —4 to 5 "
 $\frac{1}{2}$ to $\frac{5}{8}$ " —3 to 4 "
 $\frac{1}{4}$ to $\frac{1}{2}$ " —2 $\frac{1}{2}$ to 3 "

**In storage house, can be shipped
any time---sure to please you**

Write for prices

Address

DAVIS COUNTY NURSERIES
Roy, Utah

Seedling and Transplanted Evergreens by the million

Arbor Vitae	Jack Pine
Austrian Pine	Norway Spruce
Black Hill Spruce	Pinus Ponderosa
Colo. Blue Spruce	Scotch Pine
Concolor	White Pine
Engelmanii Spruce	White Spruce

We have these in all sizes and ages. Also
a general line of nursery stock.

Evergreen price list now ready.

SHERMAN
NURSERY COMPANY
CHARLES CITY, IOWA

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil
climate and expert knowledge.

Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

H. M. Simpson & Sons,
Vincennes, Indiana

The L. Green & Son Co.

Perry, Lake County, Ohio

Specialties for Spring 1910

Fine lot of 2 year Std. Pears $\frac{1}{2}$ - $\frac{5}{8}$ and $\frac{5}{8}$ - $\frac{3}{4}$ ";
strong on Bartletts. Also Cherry all grades. 2 yr.
Concord Grapes.

Catalpa Speciosa 8-10 ft.; American Elm 8-10 and
10-12 ft.; Horse Chestnut 5-6 ft.; Magnolia Acumin-
ata; Norway Maple; Silver Maple; Car. Poplars under
1 $\frac{1}{2}$ inch.

**A GOOD ASSORTMENT OF SHRUBS AND
A NICE COLLECTION OF ORNA-
MENTALS**

LET US FIGURE ON YOUR WANTS BEFORE
PLACING YOUR ORDERS.

“Replace the Old Fence with Hedge” Your Customers Say: Your Chance to Make Money With Harrison’s California Privet

Did you notice how many California Privet hedges were planted in your locality last year? Nearly every one of them went to replace a fence of wood or iron, and every one of them meant a sale for some nurseryman.

Did you make some of those California Privet sales? You could have, and you can this year, for the indications are that more California Privet will be planted in 1911 than ever. Some nurseryman is going to sell it, and in your territory, that ought to be you.

Harrison’s California Privet is making bigger sales and bigger profits for nurserymen everywhere because of its real quality. We know how to grow Privet here—we have the soil and the machinery and all the facilities for doing it right. We have literally millions and millions of plants—all grades and sizes, as you’ll see from the following list, but only one quality—the best—with plenty of husky, vigorous roots and well-branched tops that will mat into a fine, dense hedge right away.

Get our prices now on the stock you’ll need—it will pay you handsomely to investigate what we have to offer. And remember, always we have lots of other things to sell beside Privet—this list suggests only a part—so drop us a line now for particulars while the stock is at its best and plenty of time to get it to you in good shape.

LIST OF SURPLUS STOCK

CALIFORNIA PRIVET

1000, 7 to 8 ft.	50000, 2 to 3 ft.
2000, 6 to 7 ft.	50000, 18 to 24 in.
10000, 5 to 6 ft.	50000, 12 to 18 in.
20000, 4 to 5 ft.	10000, 6 to 12 in.
50000, 3 to 4 ft.	

STRAWBERRY

We Have Over Ten Million Plants

120,000 Aroma	120,000 Lady Thompson
30,000 Auto	23,000 Mark Hanna
52,000 Bederwood	120,000 Scot
19,000 Bismarck	1,000 Millionaire
52,000 Brandywine	186,000 Michel’s Early
834,000 Bubach	42,000 New York
27,000 Chipman	54,000 New Home
310,000 Crescent	79,000 Nick Ohmer
440,000 Duncan	30,000 Norwood
138,000 Ea. Hathaway	72,000 Oak’s Early
54,000 Ekey	88,000 Oswego
68,000 Excelsior	220,000 Sample
45,000 Fairdale Giant	118,000 Sen. Dunlap
200,000 Fendall	240,000 Sharpless
2,456,000 Gandy	120,000 Star
188,000 Glen Mary	20,000 S. L. Champion
400,000 Haverland	75,000 Superior
30,000 Johnson’s Ea.	248,000 Tennessee
2,280,000 Klondike	330,000 Warfield

APPLE—two-year

	6-7 ft.	5-7 ft.	4-5 ft.	3-4 ft.
	1 in. $\frac{1}{16}$ -1 in.	$\frac{5}{8}$ - $\frac{1}{8}$ in.	$\frac{1}{2}$ - $\frac{5}{8}$ in.	$\frac{3}{8}$ - $\frac{1}{2}$ in.
Akin	50	100	100	50
Arkansas Black ..	30	20	30	10
A. S. Russett	20	20	20	10
Baldwin	1200	2000	1000	1000
Ben Davis	2000	3000	3000	1000
Bismarck	20	20	20	20
Carthouse	20	20	20	20
Coffelt Beauty ..	30	50	50	10
Cooper’s E. Market	30	30	30	20
Dominie	50	100	200	100
Early Harvest ..	2000	1000	1000	1000
Early Melon	20	20	30	10
Early Strawberry	100	300	300	100
Fanny	20	20	50	30
Flora Belle	50	300	300	300
Gano	1100	1500	1500	500
Golden Beauty ..	1500	500	500	500
Gravenstein	100	800	1000	800
Grimes Golden ..	1500	1000		
Hyslop	1500	500	500	500
Ingram		20	50	50
Jeffers		50	50	50
Kinnards		100	100	100
King	50	100	100	100
Lankford	50	200	200	200
Late Raspberry ..		20	30	20

APPLE—two-year—continued

	6-7 ft.	5-6 ft.	4-5 ft.	3-4 ft.
	1 in. $\frac{1}{16}$ -1 in.	$\frac{5}{8}$ - $\frac{1}{8}$ in.	$\frac{1}{2}$ - $\frac{5}{8}$ in.	$\frac{3}{8}$ - $\frac{1}{2}$ in.
Lawyer	50	100	100	50
Longfield	50	100	100	100
Mann		20	20	10
Martha Crab		20	30	10
M. B. Twig	1500	1100		
Missouri Pippin ..	50	200	200	200
Myrick	100	100	100	50
Nero	1500	3100	3100	1100
Opalescent	50	200	200	200
Payne’s L. Keeper		10	20	30
Pewaukee	100	100	100	50
Porter		30	50	10
Rawle’s Janet		20	20	20
Red Astrachan ..	100	1000	1000	1000
Red June		20	30	20
R. I. Greening ..	100	500	500	100
Rolfe	50	200	200	100
Roman Stem		200	200	200
Salome		20	20	10
Smith’s Cider		30	50	10
Spitzenburg		300	500	200
Stark	1200	3400	3300	3200
Stayman’s	1500			100
Sweet Bough	50	50	50	50
Townsend	20	50	50	20
Transcendent ..	1500	500	500	500

Harrison’s Nurseries
J. G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND



THIS IS THE KIND OF HEDGE THAT HARRISON’S CALIFORNIA PRIVET MAKES.

